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Examining social media in the online classroom: postsecondary students' Twitter use and motivations

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Abstract: As postsecondary education develops to reflect advances in pedagogical research and practice, new technology, and students' changing needs, instructors are adapting to respond to these changes. Social media is one technology that is being adopted more in postsecondary classrooms as a tool to bridge instructors' teaching and learning objectives and students' outside interests. This research explored postsecondary students' social media use, generally and in two online courses, to determine their motivations for using social media and Twitter specifically, and to understand how students engage with each other and course-related content online. Pre- and post-surveys revealed distinctions in students' personal and academic/professional uses of social media; students were active users and were more prolific on certain platforms as compared to others and used social media for varied purposes. These findings can guide instructors' selection and integration of specific social media tools for course activity/evaluation tailored to students' interests and online behaviours.

Keywords: postsecondary students; higher education; online learning; interactive learning; Twitter; social media; motivations.

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1 Introduction

As instructors seek new strategies and employ new technologies, such as social media, to engage students and assess student learning, it is important to examine how effective these newer tools are in achieving these objectives. Twitter is one of the most subscribed to social media platforms today (Chen, 2020), and as a result of its instantaneous, text-based format, has become a leading tool for promoting and engaging in online discussion about timely topics that are dominant in society. Owing to its emphasis on real-time discourse and debate, and access to content related to our courses' themes, Twitter was selected as the focus for this study. In the current postsecondary teaching environment, following the COVID-19 pandemic in particular, with shifts to more remote and distance course delivery, there is greater impetus for the implementation of online technologies including social media/Twitter and the examination of how students use these platforms in learning, information sharing, and course connectedness and

engagement (Bautista and Cipagauta, 2019; Trust et al., 2020). One of the first steps in reaching a better understanding of this, however, is by first understanding why postsecondary students use social media, and whether these motivations align with the goals and intentions envisioned by the course instructors/developers. By understanding students' motivations for using social media platforms, and Twitter specifically, instructors/course developers can integrate evidence-informed course activities/evaluations that have been designed to complement students' existing interests and online activities, and thereby encourage increased engagement and improved performance, with the goal of enhancing students overall experience in their courses.

Twitter is emerging as a popular choice for educational professionals to develop their career, network with others, and most relevant to the present research, implement technology into their courses (Tang and Hew, 2016). Within the classroom, Twitter is typically seen as a means for encouraging communication and alternative forms of assessment. Educators can use Twitter to increase student's interactions with each other and the instructors, convey important deadlines, and apply homework assignments. Of particular importance for online learning, Twitter may be an effective educational tool when educators typically do not have face-to-face interactions. It is for these reasons also that Twitter was integrated in our online courses and used in this evaluation. Considerable research reinforces the notion that Twitter aids in student communication (Tang and Hew, 2016), social presence (Dunlap and Lowenthal, 2009; Tu, 2000), and engagement (Gammon and McGranahan, 2015; Junco et al., 2011; Peters et al., 2018; Rohr and Costello, 2015), while Twitter's use as an assessment tool continues to lack research support. Further, limited research explores students' Twitter use, behaviour/habits, motivations and intentions, and their perceptions of its usefulness/benefits.

This study therefore explored:

- 1 students' engagement with the Twitter platform before and during the completion of two online postsecondary courses
- 2 students' motivations for using social media, and Twitter specifically, including personal, professional, and pedagogical reasons.

2 Literature review

2.1 Types of social media used in teaching and learning contexts

The use of social media as a means of connecting today has become widespread. Statistics Canada's (2019) Canadian Internet Use Survey revealed that 75% of internet users (ages 15 years and older) used social networking websites and applications. Among the reasons why were to: 'keep up with the activities of friends and family' (81%), 'communicate with friends or family' (80%), 'share thoughts, pictures, or videos with friends and family' (57%), and 'share thoughts, pictures, or videos publicly' (25%).

While it is common to have accounts with multiple social media platforms, their use and purposes vary, and with this, the users and audiences of each platform do also. The most widely used social media platforms in North America are Facebook, YouTube, Instagram and Twitter (Chen, 2020). Globally, Facebook is the most widely used, and one of the earliest, social media platforms. Although younger demographics have moved

away from Facebook, it remains popular for sharing news and visual content. In 2017, Facebook revised its mission statement from ‘connecting the world’ to “give people the power to build community and bring the world closer together” (Zuckerberg, as cited in Frier and Chafkin, 2017). Still, the content shared on Facebook can elicit strong, and at times polarising, discussion.

The second most widely used platform is YouTube, which enables individuals to share content through videos (e.g., video tutorials, instructional material, product reviews, daily vlogs, and interviews). YouTube’s (2019) mission statement is “to give everyone a voice and show them the world.” In contrast, Instagram is largely used to share lifestyle images. In line with this, Instagram’s mission statement is “to capture and share the world’s moments” (Sysstrom, as cited in Isaac, 2016) and is one of the most popular social media platforms for young adults.

Another widely used social networking platform – and the focus of the present study – is Twitter. It has an excess of 300 million users and is found in nearly every country, ranking fourth in social network reach in Canada (Clement, 2019). Twitter users are often engaged in sharing and consuming content related to business/marketing and politics, and rely on Twitter as a central source of news. Twitter is a constantly advancing source of real-time information that is most commonly used by individuals of a slightly older age demographic (e.g., 30 to 60). Emphasising this real-time format, Twitter’s (2020a) stated mission is to “give everyone the power to create and share ideas and information instantly without barriers.” Similar to Facebook, Twitter’s content often provokes dynamic debate.

Although Facebook remains the most widely used social media platform globally and in Canada, the most commonly used platforms among individuals ages 18 to 24 [i.e., Canadian university student age range (Prairie Research Associates, 2017, 2019)] are Instagram and Snapchat (Chen, 2020). While all of these services have experienced fluctuating popularity as a result of increased competition from new social networking services (e.g., TikTok), the use of these platforms is expected to remain a central part of young people’s lives.

2.1.1 What is Twitter and how is it used?

Launched in 2006, Twitter is a free microblogging social network site that enables users to connect through tweets/retweets, hashtags, direct messages, favouriting, and following (Twitter, 2020b). Canadian data demonstrates that 50% of Twitter users are 35 years old or younger with 64% indicating that they primarily use Twitter to follow current news stories (Slater, 2018). Twitter is used for both personal and professional networking, with identified uses including connecting with family or friends, sharing personal stories, photos or videos, following local/public figures and organisations, monitoring celebrities, professional networking, including searching for a job, promoting events, conducting business or school activities and wasting time.

In an educational context, students use Twitter for content sharing and collaborative learning; essentially Twitter enables learning to disseminate outside of the classroom, fostering 24/7 learning and increased social presence across different platforms and facilitated reflective learning (Chawinga, 2016; Gallardo-Lopez and Lopez-Noguero, 2020; Htay et al., 2020). Chawinga (2016) reported that students used Twitter to communicate with lecturers concerning absences, deadlines and assignment, and communicate with peers or colleagues. Intrinsic motivation to use Twitter was not evident, however, as 100% of students said they used Twitter because there was a grade

attached to its use. Interestingly however, students reported it gave them a chance to contribute when they were too shy to do so in class.

Results from Chawinga (2016) propose Twitter can enhance teaching and learning if appropriately used and claims microblogging complements blended learning by contextualising concepts, providing an opportunity for comprehensive learning and collaboration, and allows for reflective learning and influences student participation. This claim is supported by Gallardo-Lopez and Lopez-Noguero (2020), who found that incorporating Twitter in to their students learning environment lead to improved learning, the expansion of knowledge and the acquisition of skills that can be transferred to other subjects and outside the classroom.

Given its varied uses, it is not challenging to appreciate why Twitter has been described as merging both formal and informal teaching environments as it uses 'just-in-time' (Dunlap and Lowenthal, 2009) or '24/7' (Chawinga, 2016) means of communication (Eaton and Pasquini, 2020; Reed, 2013). Owing to the 280-character limit, concise, short-format posts, Twitter is more instantaneous and interactive than traditional course emails or discussion posts (Chawinga, 2016; Dunlap and Lowenthal, 2009; Reed, 2013). Still, this microblogging tool is favoured as a communication tool that further enhances course engagement (Junco et al., 2011; Park, 2013), as discussion forums are deemed less accessible and more formal (Junco et al., 2013).

2.2 Motivations for social media use and platform selection

Two essential considerations when selecting a type of social media platform for postsecondary learning are the motivations for using social media generally, and for the intended purposes of the course specifically. Theories on individuals' motivations (e.g., self-determination) suggest that when students' participation/engagement in an activity satisfies basic psychological needs, more precisely in this context by receiving autonomy support, they will be more likely to recognise the importance of and engage in that activity (e.g., Filak and Sheldon, 2008). Researchers have explored individuals' motivations for using social media. Liu et al. (2010) proposed eight motivations for Twitter use (i.e., self-documentation, information sharing, social interaction, entertainment, passing time, self-expression, medium appeal, and convenience), while Whiting and Williams (2013) identified ten factors that motivate social media use more generally, including similarly information sharing, information seeking, social interaction, entertainment, passing time, expression of opinion, convenience utility, relaxation, communicatory utility, and surveillance (i.e., knowledge about others). In a more recent study, Stanley (2015) examined the differences between undergraduate students' Facebook and Snapchat use, and determined that Snapchat was more commonly used; students felt more compelled to use Snapchat because their peers were and their interest in the content. Facebook alternatively was used as a form of networking, particularly among males, while females used social networking sites (SNSs) to follow family/friends.

Researchers have emphasised that Twitter's character limit impacts users' social media motivations and gratification, and that users' intentions to use Twitter are based on motivations to share information and engage in social interaction (Liu et al., 2010). One study showed that Twitter use among opinion leaders was dictated by content gratification and technology gratification, and users' motivations for self-documentation, information seeking/sharing, and the accessibility and convenience by which Twitter

could facilitate mobilisation (Park, 2013). The importance of motivation was highlighted by Hortigüela-Alcalá et al. (2019), who found that the pedagogical use of Twitter in the classroom significantly impacts students' motivations to participate. Twitter use was linked to increased student motivation and involvement, and improved levels of course achievement, indicating that the development of social networks can benefit teaching and learning (Hortigüela-Alcalá et al., 2019).

Interested in understanding the unique attributes that drew postsecondary students to Twitter, Facebook, Instagram, and Snapchat, Alhabash and Ma (2017) applied the uses and gratifications (U&G) approach. This approach asserts that:

- 1 (social) media users are 'active and goal-oriented consumers'
- 2 use fulfils certain needs
- 3 satisfying these needs results in competition between other (social media) sources
- 4 users recognise their interests and motives and select particular forms of media based on their knowledge of this
- 5 users can judge media quality [Alhabash and Ma, (2017), p.3].

The researchers evaluated motivations for using social media and SNSs and found that Instagram was utilised the greatest (i.e., daily and highest intensity), with Snapchat being the close second/almost equal, and then Facebook and Twitter. Importantly, the survey results revealed that students used all four platforms for information sharing, entertainment, and convenience, but for Twitter specifically, motivations beyond entertainment and convenience included in the following order medium appeal, passing time, self-expression, information sharing, social interaction, and self-documentation (Alhabash and Ma, 2017). Notably for Twitter (and Facebook), information sharing was rated higher as a use motivation in comparison to the Snapchat and Instagram use motivations, in which information sharing was ranked last. These studies provide strong evidence for the varying motivations in social media platform selection and use.

More recently, Denker et al. (2018) examined the relationship between online communication attitudes and college students' motivation to communicate and participate through Twitter in the educational environment. Their results indicated that online communication attitudes shaped the students' motives to communicate. Online communication attitudes included self-disclosure, apprehension, miscommunication, ease and social connectedness. Most prominently, ease of social media use was key to participation motives while willingness to self-disclose was negatively related to participation motives. The authors explained this by hypothesising that students who are willing to self-disclose online are not motivated to participate in an educational environment via social media as they may not wish for instructors or others to know about their personal lives. Results suggested that the integration of social media is beneficial; specifically, Denker et al. (2018) suggested that integrating social media for the purpose of communication can be less intimidating for some students and may result in stronger relationships with instructors, particularly in large enrolment classrooms.

As learning through social media is relatively new, it is also important to consider the different learning styles of students and the impact on social media use intentions. Balakrishnan and Lay (2016) explored the use of social media in relation to student learning styles (i.e., participatory, collaborative, and independent) and concluded that the

popularity of social media encourages learning and offers options for creating online study groups, idea sharing, and interacting among students and lecturers, irrespective of students' learning style. On the other hand, the researchers found that learning styles had a stronger influence on students' intention to use social media compared to personality type [i.e., extroversion or introversion (Balakrishnan and Lay, 2016)].

The purpose of the present study was to understand how active postsecondary students' were on Twitter and whether this was influenced by the requirements of the respective course, and to ascertain students' overall intentions for using Twitter. It is important to assess how often and whether students used Twitter for the reasons intended in the course design, i.e., to consume, share, and discuss timely content related to the course themes in an open and accessible forum, so instructors/course developers can ascertain strategies that may (or may not) enhance student engagement with course material and relevant themes online. Due to the lack of research that examines online postsecondary students' motivations for using social media, and Twitter specifically, we asked:

- 1 Does students' overall Twitter use differ based on being required to use Twitter in postsecondary course activities/evaluation (i.e., before and during the completion of the course)?
- 2 What are postsecondary students' motivations for using social media and Twitter specifically?

We hypothesised that students' overall Twitter use would increase during the completion of the course, as its use was required and students were evaluated based on their participation level. Based on the literature, we also expected students to report their motivations for using social media would be to connect, communicate, and share media with friends and family.

3 Methodology

To answer these questions, the present study collected survey data from a convenience sample of postsecondary students enrolled in two lower-level courses at Memorial University located in eastern Canada in fall 2019. Both the course instructors integrated Twitter activities as an alternative discussion/evaluation tool intended to promote meaningful course engagement (West et al., 2015).

3.1 Participants

The sample was composed of postsecondary students enrolled in one online section of an introductory human kinetics and recreation (HKR 1000) course and one online section of an introductory police studies (PLST/SOCI 2300) course. HKR 1000, fitness and wellness, is a popular elective course for the broad university student community that 75 students completed in the fall 2019 semester. Part of the evaluation in the course required students to complete three unique Twitter assignments, with each assignment asking students to complete one original tweet and one response tweet to another students' tweet to specific questions during pre-determined weeks of the semester.

The first Twitter assignment during week six asked students to reflect on the overall health and wellness of the class. The second Twitter assignment was completed during week 10. Here, students were asked to “Locate a recent news story (from the past year), from a recognised, credible news source that exemplifies one or more health and wellness topics discussed in HKR 1000. Share the link for this news story on Twitter, commenting in your tweet on the relevance/importance of the story to individual health and wellness.” The final Twitter assignment in week 12, asked students to reflect on their mood-monitoring activity that occurred throughout the semester and link what they have learned about themselves to course content.

Police Studies/Sociology 2300 (PLST/SOCI 2300), criminological inquiry, is a cross-listed, lower-level course in the Department of Sociology that is widely taken and is required for police studies and criminology students at Memorial University. Offered exclusively in an online format, there were 62 students enrolled in the course at the beginning of the fall 2109 semester and 52 students remained in the course by the end of the semester. Students were asked to complete three Twitter events during weeks 6, 10, and 12 of the 13-week semester as part of the course evaluation. For each Twitter event/assignment, students were expected to locate and tweet one news story from a credible news source related to deviant/delinquent behaviour/crime and include, in 280-characters or less, a critical comment/assessment of the story in relation to the course topics for the respective week. For the first Twitter event/assignment, the theme was feminist criminology; the second theme was criminological/sociological research methods; and the third Twitter event/assignment theme was criminological/justice-related policy or legislation. For each event, students were asked to make an original tweet that included the link to the selected news item, retweet at least one original tweet from a classmate or the course instructor, and to respond to at least one classmate/instructor’s tweet.

3.2 *Online course apparatus*

Brightspace is the learning management system utilised by Memorial University. Embedded within each of the course shells (HKR 1000 and PLST/SOCI 2300) was detailed information explaining how to setup a Twitter account, how to post tweets, as well as pertinent course information including course evaluations and expectations. Students were required to use the correct course hashtag (#) (#HKR1000 or #SOCI2300) for every tweet posted, in order to be captured for grading purposes.

3.3 *Procedures*

Data were collected using a pre- and post-survey research design. This research design permitted the provision of pertinent social media use information directly from the students, who as the targeted learners, should help inform the development of instructors’ pedagogical strategies and their assessment (Shuell and Farber, 2001); this can extend to use of technology in coursework and evaluations, and how to most effectively maintain or, if needed, discontinue the use of these types of pedagogical tools (Cohen, 1981; d’Apollonia and Abrami, 1997). The survey questions were developed based on the above-cited research literature, the authors’ research questions, and one of the present study author’s previous studies on Twitter and postsecondary engagement (Peters et al.,

2018, 2019). The course instructors administered identical pre- and post-surveys in each course.

During the first two weeks of the semester all students were invited to complete an anonymous survey within Brightspace. The 23-question survey requested demographic information including gender, age, year of postsecondary study, and if a major/minor had been declared. Further information about social media use, the number and purpose of accounts held, students' prior experience with social media/Twitter in postsecondary education, students' motivations for using social media (Liu et al., 2010; West et al., 2015; Whiting and Williams, 2013), and their expectations regarding Twitter in their respective classes was requested. In total 104 students completed the pre-survey, 65 from HKR 1000 and 39 from PLST/SOCI 2300.

During the final two weeks of the semester students were again invited to complete an anonymous survey within Brightspace. This survey contained some of the pre-survey questions (e.g., requesting demographic information) and focused primarily on students' perceptions of Twitter's use in the course. Thirty-four students completed the post-survey (i.e., 23 HKR 1000 students and 11 PLST/SOCI 2300 students).

The anonymised data that was collected from the students' pre- and post-surveys was then entered into SPSS 27 and analysed using descriptive statistics (e.g., frequencies, means).

4 Results

The study's results are presented in four themes, organised as:

- 1 sample characteristics
- 2 students' social media and Twitter use
- 3 students' motivation for using social media and Twitter
- 4 students' Twitter course use, intentions and expectations.

4.1 *Sample characteristics*

A summary of the postsecondary student respondent's profiles is presented in Table 1. The majority of students who responded to the pre- and post-surveys identified as female (almost two-thirds in pre-survey and three-quarters in post-survey), reflective of the large proportion of females enrolled in both the HKR and PLST/SOCI courses.

The postsecondary students had a mean overall age of 20 years old in the pre-survey and 22 years old in the post-survey. By course, HKR 1000 student respondents had a mean age of 18 years (pre-survey) and 22 (post-survey), and PLST/SOCI 2300 students were 21 years and 22 years respectively. Approximately 81% of HKR 1000 students who completed the pre-survey and 70% who completed the post-survey were in their first year of postsecondary education. In contrast, only 5% (pre-survey) and 0% (post-survey) of the PLST/SOCI 2300 students were in their first year of university study. Slightly more than half (pre-survey) and almost two-thirds (post-survey) of PLST/SOCI student respondents were in their second or third year of postsecondary education.

In consideration of the program organisation, it was anticipated that SOCI 2300 students would be on average, slightly older and further along in their academic careers

than the HKR 1000 students. Results confirmed this expectation. While PLST/SOCI 2300 is a course presenting foundational criminological information, students are required to take SOCI 1000, introduction to sociology, as a pre- or co-requisite to PLST/SOCI 2300. HKR 1000 however is an introductory course, available to non-HKR students as an elective in their program, and is often completed by students in their first semester at university. Similarly, 97% of respondents from HKR 1000 were completing their first HKR course, while 87% of the students in PLST/SOCI 2300 were in their second or more police studies/sociology/criminology course. The PLST/SOCI 2300 students not only had more previous university experience, they also had completed other police studies/sociology/criminology courses.

Table 1 Sample characteristics

<i>Indicators</i>	<i>Pre-survey (N = 104) mean/%</i>	<i>Post-survey (N = 34) mean/%</i>
Age	20.4 (n = 88)	21.7 (n = 31)
Gender		
Female	64.4	74.2
Male	34.6	25.8
TG/NB	1.0	0.0
Course		
HKR	62.5	67.6
PLST/SOCI	37.5	32.4
Year of study		
1st year	52.9	45.2
2nd year	13.5	12.9
3rd year	12.5	19.4
4th year	8.7	12.9
5th year or higher	12.5	9.6

4.2 *Students' general social media use*

Students' general social networking use, including Twitter, was delineated between pre and post-surveys. Data is presented in Table 2.

4.2.1 *Pre-course social media/Twitter use*

Overwhelmingly, student respondents indicated having multiple social media accounts: approximately 80% claimed to have four or more accounts, and 37% had six or more. Almost the entire sample (97%) had Facebook and Instagram accounts, and a large proportion also indicated having Snapchat (82%), Twitter (72%), YouTube (59%) and Pinterest (39%) accounts prior to taking their respective course.

Having accounts and using social media accounts were clearly different. Approximately half of respondents indicated actively using all of their accounts, while the other half claimed to actively use two or three accounts. Snapchat (49%) was the most frequently used social media account, followed by Instagram (13%), and Facebook (7%). Interestingly, there was a more pronounced difference in the proportion of HKR students (59%) who indicated using Snapchat more than Instagram. Among the respondents from

PLST/SOCI 2300, use of Snapchat (31%) and Instagram (33%) were more evenly divided.

Given that our focus was on Twitter use, the majority of students had a Twitter account prior to commencing the courses and almost half of students reported weekly use or more (see Table 2). There was a slight shift in frequency of Twitter use in the post-survey as the data suggest more students were tweeting either weekly or daily compared to the pre-survey.

4.2.2 *Post-course social media Twitter use*

In response to the questions surrounding semester Twitter use, 58% indicated they used Twitter more throughout the semester than they did previously, 36% indicated that they used Twitter the same amount, and 7% indicated they used it less.

Table 2 Students' general social media use

<i>Indicators</i>	<i>Pre-survey (N = 104)</i>	<i>Post-survey (N = 34)</i>
Number of social media accounts		
One	0.0	-
Two to three	19.6	-
Four or more	80.4	-
Number of social media accounts active		
One	3.8	-
Two to three	47.1	-
Four or more	49.1	-
Social media platform accounts (top 4)		
Facebook	97.4	-
Instagram	97.4	-
Snapchat	82.1	-
Twitter	71.8	-
Most frequently used social media account		
Instagram	33.3	-
Snapchat	30.8	-
Facebook	18.0	-
Twitter	7.7	-
Other	10.2	-
Prior Twitter account	69.2	-
Frequency of Twitter use		
Daily	25.0	25.8
Weekly	21.4	29.0
Monthly	17.9	12.9
Once or twice	35.7	32.2

Tasked with completing three Twitter events throughout the semester, 90% of students completed all three assigned events. The majority of students (68%) indicated they only

used Twitter three times, for each of the three evaluations, while 16% responded that they used Twitter for the course on a weekly basis, and 16% indicated that they only used it once or twice.

4.3 Motivations for social media and Twitter use

Table 3 summarises how students used social networking platforms and their motivations for using social media, specifically Twitter. Of those students who used Twitter prior to these courses ($n = 82$), approximately 39% used it for personal reasons only, 16% used it for personal and course-related activities, and 6% used it solely for course-related activities. Before using Twitter for these courses, most of our sample agreed (68%) that Twitter is most useful as a personal/social and professional tool. Only 17% did not perceive Twitter to be useful at all, while 14% believed Twitter should only be used for social/personal reasons.

The three primary reasons for students in our sample to use social media accounts prior to enrolling in these courses was to connect with family and friends/connect with people they knew (84%), to stay up-to-date on news from celebrity/public figures (34%), and to 'waste time' (23%). A few notable differences between the subsamples of HKR 1000 and PLST/SOCI 2330 students however: while only approximately 17% of HKR 1000 students used social media to conduct business, approximately 44% of PLST/SOCI 2300 students used SNSs for the same purpose. Students in PLST/SOCI 2300 identified using social media to conduct employment searches and to network professionally. This will be examined further in the discussion section.

Table 3 Students' motivations/purposes of using social media

<i>Indicators</i>	<i>Pre-survey (N = 104)</i>	<i>Post-survey (N = 34)</i>
Primary type of social media use		
Personal only	38.7	22.6
Course-related only	6.4	16.1
Personal and course-related	9.7	25.8
Have but infrequent use	32.3	16.1
No prior account	12.9	19.4
Primary purpose of Twitter use		
Follow celebrities	10.9	6.5
Follow friends and/or family	9.9	12.9
Follow public figures/organisations of personal interest	8.9	6.5
Follow trending stories	5.9	3.2
Complete university-related activities or assignments	-	45.2

The main reasons students used Twitter specifically prior to fall 2019 were: to follow trending news about celebrities (11%), to follow friends/family members (10%), to follow trending (local and [inter]national) public figures/organisations that related to their personal interests (9%); this was followed closely by the non-use of Twitter (12%).

Students were asked to identify their main reason for using Twitter in the pre-survey. After excluding the non-users, the primary reason for using Twitter specifically was to:

follow celebrities (e.g., actors, athletes, musicians, authors and artists; 11%); follow friends and/or family members (10%); follow public figures/organisations that have national/international followings related to their personal interests (9%); and follow trending stories (6%). Other less commonly selected response options included: networking for social and professional reasons and following public figures/organisations that have national/international followings related to their professional interests.

Following the completion of the Twitter activities, one-third of students revealed the main reason they used Twitter was to complete university assignments; when combined with completing university activities, this represented the most common reason among almost half of respondents (approximately 45%). The second most popular reason for using Twitter was to follow/keep in contact with friends/family members and follow trending news stories.

4.4 *Students' intentions for social media use in postsecondary courses*

The next set of results explored how students intended to use Twitter in the HKR and PLST/SOCI courses specifically (see Table 4). Over half of students (56%) shared that they had created a separate Twitter account for university/course-specific use. Approximately 17% of students did not have a Twitter account prior and had to create an account. Only 16% of students had used Twitter in a previous university course; it is important to note that approximately half (53%) of the sample was composed of first-year students, who would have never been enrolled in any university courses before.

Table 4 Students' university/course-specific Twitter use

<i>Indicators</i>	<i>Pre-survey (N = 104)</i>	<i>Post-survey (N = 34)</i>
Separate uni-course Twitter account (Y/N)	56.3	-
Twitter use in previous university course (Y/N)	16.3	-
Anticipated and actual semester Twitter use frequency		
Weekly	45.2	14.7
Monthly	20.2	5.9
Three times	26.0	61.8
Less than three times	8.6	14.7

Students were asked in the pre-survey how often they anticipated using Twitter during the semester. While almost half (45%) of respondents anticipated using Twitter weekly, post-survey data indicated that only 15% used the platform weekly. Instead, 62% used it only three times, directly corresponding to the number of Twitter events/assignments assigned.

5 **Discussion students' general social media use**

In this study, Facebook and Instagram were the social media platforms with the highest proportion of postsecondary student users (97% each); however, Instagram (33%) and Snapchat (31%) were reported as the most commonly/actively used platforms. These results are consistent with existing data that highlights the popularity of Instagram and

Snapchat among younger demographics (Chen, 2020). By design, Instagram and Snapchat are social media platforms that encourage users to share ‘what they are doing’ typically using photos or visual images, with little or no text. Twitter in contrast is described as a platform for “what’s happening in the world and what people are talking about right now” (Twitter, 2018). Given that we were interested in encouraging and assessing students’ knowledge and application of course concepts, neither of these platforms was suited towards student reflection or critical thinking. Twitter provided a social media platform that fostered concise, critical, reflective thinking and debate and was intentionally selected as the social media platform for evaluation in HKR 1000 and PLST/SOCI 2300. Overall our students indicated they used Twitter more during the semester than they did prior to registering in HKR 1000 or PLST/SOCI 2300. This finding was anticipated given the proportion of students who did not have an account and/or did not use Twitter prior to course enrolment.

These findings taken together suggest that instructors should consider the demographic profiles and other pertinent characteristics of their typical students and select a social media platform (and/or other teaching/learning technology) that students are familiar/comfortable with and can easily access and navigate. Ease of use and convenience are key factors that also influence students’ motivations to use specific social media platforms (Denker et al., 2018; Liu et al., 2010; Whiting and Williams, 2013). In the case of HKR and PLST/SOCI, the course instructors had clear intentions in selecting Twitter as the social media platform, thus they provided students with clearly articulated Twitter account use guidelines and instructions.

5.1 Motivations for social media and Twitter use

Data has shown 50% of Canadian Twitter users are under 35 years of age, with the most common use of Twitter being to keep up with trending news stories (Slater, 2018). In an attempt to align our Twitter assignments with this perspective, one of our assignments required students to reflect on a current news story, related to their academic course, and reflect on the media viewpoint in relation to their understanding of course content. The mean age of our sample was 21 years of age and reported primarily using social media for personal reasons; in fact our data revealed ‘following current news’ as the least likely reason to use social media with less than 6% of students identifying keeping up with trending news stories as a priority. Similar to a Statistics Canada’s (2019) study and other research (Stanley, 2015), our postsecondary student sample indicated in the pre-survey that social media was primarily used to connect with family and friends, and Twitter was mainly used to follow celebrities, friends and/or family members, or public figures/organisations related to their personal interests (Schimmele et al., 2021); this can likely be attributed to the younger demographic of our and many postsecondary student samples. By encouraging this type of use for social media, however, courses such as the two examined in this research can encourage more diverse uses of social media, including Twitter, among this age group, and present new/alternative opportunities for learning and discussion that students may otherwise not have considered.

A small proportion of students indicated using Twitter for networking, socially or professionally, and following public figures/organisations related to their professional interests. We challenged these views by asking students to use Twitter as a component of the evaluations in their academic courses. Following the requirement to use Twitter as

part of the evaluation for a postsecondary course, almost half of our sample of students in the post-survey indicated using Twitter to complete university assignments and activities (followed closely by keeping in contact with friends and family). This is a change in their use behaviours when compared to the pre-semester survey, however, this change can be directly attributed to the requirement of having to use Twitter to complete course assignments. This was an expected outcome of the requirement, and thus, is not a salient outcome.

A greater proportion of the PLST/SOCI students used social media to conduct business, to conduct employment searches, and to network professionally compared to the HKR 1000 students. This is a common use of social media among university students as demonstrated in previous research (Alim and AlShourbaji, 2020). The course-level differences may again reflect the difference in ages between the participants, as well as their stages in their postsecondary education. The majority of PLST/SOCI students have already declared their majors/minors, whereas the majority of HKR 1000 students are undeclared students and have selected HKR 1000 as an elective to their yet-undetermined major or degree program. The slightly older PLST/SOCI students have determined their academic/career trajectories and may be more intrinsically motivated to use Twitter for professional/business pursuits compared to HKR 1000 students whose academic trajectories are still undecided. Essentially, the older students may have discovered the power of social networking via Twitter as a tool to develop their professional networks. This is consistent with Twitter user age/demographic trends with slightly older adults using Twitter more regularly than individuals in adolescence or early adulthood (Auxier and Anderson, 2021). As suggested from the existing data on social media user demographics, this may be due to the different social media/networking goals of individuals who, as they age, are more actively seeking real-time information and news, and who are interested in "...creat[ing] and shar[ing] ideas and information instantly without barriers", as per Twitter's (2020a) mission statement. Previous research also demonstrated that social media use activity level/intensity increased as undergraduate students' class standings increased [i.e., sophomores compared to freshman (Romero-Hall et al., 2020)].

In terms of specific platforms, although research has demonstrated that Snapchat, and most recently TikTok, have become a more commonly used social media platforms among undergraduate students when compared to Facebook (Stanley, 2015) and other popular sites (e.g., Snapchat and Instagram), the purpose of and motivations for selecting Twitter as a pedagogical tool have been supported in the research revealing its important role in information sharing and mobilising more critical discussion and even the political involvement of opinion leaders (Auxier and Anderson, 2021; Park, 2013). Previous literature has presented several common primary motivations for using Twitter that are consistent with the goals of its use on these two introductory courses, including information seeking and sharing, communicating, social interaction, self-expression, and partially as well, convenience (Malik et al., 2019; Whiting and Williams, 2013). As Alhabash and Ma's (2017) research revealed, information sharing was a stronger motivation for using Twitter as compared to Snapchat and Instagram for which this purpose came last. This supports our assertions that Twitter can be a more powerful tool over other social media platforms in postsecondary education, in which the goals and objectives of the related activities are to seek and share information on specific topics and to engage in thoughtful discussions and critical thinking activities associated with these themes.

The intentions of our Twitter activities were multifaceted and included: to motivate students to connect with one another outside a traditional course setting (*social interaction*); to be creative in their news story/content selection and application of course content through their 280-character limited (*communication*), to use thoughtful comments (*information seeking and sharing*), as well as to mobilise students to be confident in sharing their own knowledge and seeking the feedback and comments from others who have similar interests (*self-expression*). Based on its organisation, structure, and the objectives of those who use the platform, Twitter can expose students to a diversity of alternative perspectives and encourage energetic debate in ways that Snapchat, Instagram, and even Facebook, are less likely to foster or facilitate via images/videos alone, and/or mixed-media format and content.

As cited earlier, Denker et al. (2018) found that some students may be less motivated to participate in social media-based activities or evaluations in an effort to remain private, while the integration of social media can be less intimidating for some students. As applied to the present research, it is anticipated that older/upper-year students' motivations behind their Twitter use behaviours are more confident in presenting questions, sharing their perspectives/comments, and engaging in constructive debate, thus are more open to using social media as a learning tool. This also is an important reminder that all students have varying comfort levels in diverse settings and thus have different instructional/learning needs, especially in online, asynchronous courses. Still, if instructors integrate Twitter as a tool in a way that does not require in-depth or any personal self-disclosure, students may be more inclined to participate and even perceive this strategy as less intimidating than participating in an in-person, on-campus course.

5.2 *Students' intentions for social media use in postsecondary courses*

The HKR and PLST/SOCI students began the semester with ambitious intentions for Twitter use, disclosed on the pre-survey, with slightly less than half the students anticipating using Twitter weekly. Yet in the post-survey, the majority of students only used Twitter three times, which was the required number of Twitter events/assignments, and minimum participation requirements. Although not fully revealed from the post-survey, we hypothesise a number of possible explanations for not using Twitter on a weekly basis. Conceivably, particularly for the new users of Twitter, some students may have discovered they do not like Twitter and chose not to participate outside of the evaluation requirements. Alternatively, students may have perceived themselves as too busy to engage in any additional, non-graded/required activities.

This lack of regular participation has been shown to create a cyclical dilemma for social media use in higher education: a lack of regular tweeting from student learners or instructors can lead to further lack of tweeting (Dunlap and Lowenthal, 2009; Malik et al., 2019). Student participation is fuelled by other students participating and from instructor engagement on the social media platform (Junco et al., 2011, 2013; Chawinga, 2016). Conceivably, regular, perhaps weekly, use of Twitter for evaluation would increase student participation. Further, Krutka and Damico (2020), found that students were most likely to tweet around assignment deadlines, and once course had ended, the majority of students ceased to use their Twitter accounts further, which is similar to the results of our research. It is unknown, however, if regular but ungraded Twitter requirements would be embraced by students.

6 Implications

Attention should be directed toward several factors when selecting a social media platform for integration into the academic environment. First, the platform should reflect the desired learning outcomes for the course. Here, Twitter was selected to provide a platform for critical thinking, debate and reflection. Students were required to connect course content to real world events and information, ultimately encouraging integration of personal perspectives with academic course work. Second, students' motivation to use the platform is relevant. Our data suggest students were not intrinsically motivated to use Twitter prior to the courses, with only a small increase in regular use after the course. Further clarity provided by the instructor via a priori guidance on the role and use of Twitter as a professional networking tool may lead to further adoption of Twitter by students in their professional lives. Interestingly, the PLST/SOCI 2300 students were more inclined to use Twitter than the HKR 1000 students, potentially reflecting their learned understanding that Twitter is a powerful professional networking tool. Third, as noted by Denker et al. (2018), ease of use is important for social media users, and while our students did not report any major issues using the Twitter platform, it should be the responsibility of the course instructor, at a minimum, to provide students with straightforward instructions on how to use the selected social media platform or technological tool. Instructor participation and sample tweets/posts can also be incredibly helpful, particularly when the integration of Twitter/social media is for student evaluation/assessment purposes.

The importance of clearly outlining the objectives in using Twitter or other social media platforms in postsecondary settings is based on the previously cited self-determination theory research that revealed students' positive motivational outcomes, engagement in an activity and importantly, their belief in its value, are related to autonomy-supportive motivational styles from the instructor through which students have choice (e.g., Filak and Sheldon, 2008). Although the Twitter evaluation activities were guided based on the course material for that week, students possessed autonomy in selecting a relevant news story and guiding the discussion on that content for that week. According to Filak and Sheldon's (2008) work, this can promote self-determined motivation, leading to needs satisfaction, and ultimately course and instructor approval. The uses and gratifications (U&G) approach applied in previous research emphasises that, as 'active and goal-oriented consumers', social media users subscribe to these platforms to fulfil various needs and seek platforms based on how well they can support satisfying these needs (Alhabash and Ma, 2017). If instructors can ascertain students' needs and clearly articulate how the selected platform aligns with these, the course and/or evaluation goals, and how students can use their tweets to accomplish these goals, there may be greater student 'buy-in' for the use of Twitter and greater student satisfaction with the course/instructor overall.

7 Limitations and future research

This research builds on the narrow body of literature examining postsecondary students' motivations for using social media and their perspectives on its use in higher education. We found that most students Twitter use behaviours are linked to their motivations for

using Twitter, their year of study and prior conceptions of social media's place in the classroom.

Still, in addition to the more ostensible but common limitation of small sample size, we identify a number of limitations with the current project. First, due to a technical issue, students in PLST/SOCI 2300 had only a few days to access the post-survey, ultimately scheduled during the examination period, after classes had ended for the semester. This negatively impacted the number of responses received from this group. Second, the post-survey data was primarily from slightly older students, likely reflective of their greater dedication to their studies than younger students. It is unknown if this slightly older sample influenced the data on motivation and social media use.

Instructors and future research should consider students' learning styles, personality type, and the impact of these on social media use intentions, as Balakrishnan and Lay (2016) and others (Zhang et al., 2018) have demonstrated that students' intentions to use social media was more greatly impacted by their learning styles as opposed to their personality type. It would also be valuable to conduct research on the differences in social media/Twitter use between students of various ages and genders, particularly in consideration of our findings and those from existing studies (Stanley, 2015; Zhang et al., 2018) that found different use between males and females. Continued research should also examine the effect of (greater) instructor/(student) participation/engagement (Chawinga, 2016; Junco et al., 2011) and more regular course-related use of social media/Twitter on student social media/Twitter participation and use motivations.

Another identified challenge and consideration in this form of course activity and evaluation that can also be related to motivations and use intentions is the potential moral/ethical dilemma felt by instructors in expecting students to post content online publicly and whether students should be required to do this. Ultimately, the authors of the present study believe if social media is being incorporated in a positive and constructive way, with the option for students to create an alias account, that social media-based activities can promote self awareness, and a reflection on how we represent ourselves in any public forum, and develop practices and skills in these areas.

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