SUMMER MELT

Exploring "Summer Melt" for BC Post-Secondary Institutions

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The term "summer melt" denotes a phenomenon when post-secondary students who received an offer of admission and may have paid a deposit when accepting the offer, "fail to enroll at all in the fall after high school graduation" (Castleman et al., 2013, p. 6). Since the early 2010s, the scope of the summer melt and the efficacy of activities to mitigate the phenomenon have been investigated in multiple American studies on post-secondary education and student access (Castleman et al., 2012, 2014; Castleman & Page, 2014b, 2014a; Owen, 2014). While post-secondary institutions assess the difference between applicants and enrolled students at their own institutions, this short report follows the definition of summer melt as applied to students who do not enrol at any institutions in the fall following the high school graduation.

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The research led by B.L. Castleman (e.g., Castleman et al., 2012) increased the use of the term "summer melt" in publicly available literature. The estimates of how many high school students contribute to summer melt vary from 10% to 44% of successful applicants, based on data from three large school districts and a national longitudinal survey in the USA (Castleman & Page, 2014a; Owen, 2014; Arnold et al., 2015; Burke, 2022). Higher estimates were found in community colleges, and for under-represented, low-income, racialized, and first-generation students (Castleman & Page, 2014a, 2014b). Assessing the extent of summer melt and the success of measures to reduce it has become more relevant for jurisdictions/institutions with dwindling enrolments, especially during and after the COVID-19 pandemic. A recent study estimated an increased summer melt rate (20-30%) during the COVID pandemic (Burke, 2022).

FACTORS CONTRIBUTING TO SUMMER MELT

The identified barriers for students experiencing summer melt can be discussed in the context of barriers for transitioning to college in general (French & Oreopoulos, 2017). The barriers typically include hurdles with financial aid and budgeting (Castleman & Page, 2016; Holzman & Hanson, 2020; Page et al., 2020; Briggs, 2021; Glenn, 2023). Winn (2019) arrived at similar conclusions with the focus on urban low-income students and their transition to post-secondary education.

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Applicants may be unaware of additional fees beyond the tuition, such as costs of housing, books and student activity fees, and/or find difficulties filling out and submitting financial aid documents (Arnold et al., 2009). Other forms related to the logistics of becoming a student may also contribute to summer melt. These could include housing/ student residence applications, medical and vaccine history, visa or residency status, test scores and others. Online portals can be difficult to navigate for students with limited internet access (Castleman et al., 2013).

In addition, high school graduates typically lose access to high school counselors and teachers in summer. The absence of this support creates another barrier for the post-secondary applicants, even if their family and friends are supportive of their application. Support programs led in partnership with or by post-secondary institutions can reduce the barrier (Castleman et al., 2013). Other factors include issues with "institutional calendars, family and peer issues, college knowledge, cultural and community, norms, and academic history" (Arnold et al., 2015, p. 24). Changing personal circumstances can also play a role: family moving to a different place of residence, death in the family, procrastination, or summer work turning into a long-term employment can all increase the number of accepted applicants who do not enrol in the fall.

STRATEGIES TO REDUCE SUMMER MELT

Multiple sources mention staying connected with the students throughout the summer as the key successful measure to reduce summer melt (Table 1). Specialized high school counsellors and other staff can provide the connection to high school graduates. The research team led by Castleman (2013) reported a 4% to 8% increase in on-time post-secondary enrolment (without defining "on time") when high school counsellors stayed connected with prospecting students during June – August in a few school districts in various states in the USA. Daugherty (2012), summarizing the early success of one of the programs, indicated the involvement of teachers and other school staff (e.g., financial advisors), in addition to counsellors.

The use of customized text messaging appeared to increase enrolment by 3%, with higher likelihood for increases in enrolment in four-year post-secondary institutions (Page et al, 2020).

Tackett et al. (2018) reported a 1.4 times higher likelihood of going to college in the fall immediately after high school graduation for students who were in the post-secondary support program than for a comparative student group not in the program. In this study, high school counsellors met with students and also used other tailored communication methods (letters, electronic communications). However, the research methodology used for the study did not allow for identification of the most successful method of reaching out to students.

An increased matriculation rate of 3% to 5% could also be achieved with proactive post-secondary counselling (Castleman et al., 2012; Castleman & Page, 2014b; Castleman et al., 2015). Other helpful options to reach out to students were automated text messages, support of financial aid advisors (Castleman & Page, 2014b; Tackett et al., 2018), mentoring (French & Oreopoulos, 2017) and chatbots (Georgia State University, N.d.). The use of customized text messaging appeared to increase enrolment by 3%, with higher likelihood for increases in enrolment in four-year post-secondary institutions (Page et al., 2020). Emerson (2022) suggested that the use of social media for reducing summer melt; however, no estimates of its reduction were provided.

Owen (2014) provided a comprehensive list of steps for high school counsellors who want to support their students transitioning into post-secondary education before high school students graduate. The list ranges from disaggregating data to identify groups of students most at-risk of summer melt, to connecting with students and their parents, to monitoring the effectiveness of the interventions. While Owen (2014) suggested that the interventions worked, no specifics were given on the success of these measures.

French and Oreopolus (2017) discussed the cost-benefit analysis of institutional measures and suggested simplifying the application process (including financial aid application), text messages, and orientation videos as inexpensive options to increase transitioning to post-secondary and retention. The conclusions that the authors provided apply to overall reduction of barriers transitioning to college, and did not suggest measures specific to reducing summer melt beyond the studies discussed above. Other studies focusing on transitions to post-secondary also highlighted simplification of the financial aid application as a successful intervention (Oreopoulos & Ford, 2019; Taylor & Hartman, 2019; Holzman & Hanson, 2020; Briggs, 2021).

Table 1. The costs and the effects of interventions of reducing summer melt

Measure	Cost per Student	Increased Enrolment	Source
High School Counsellors	$200	5% more likely than students without measure	Castleman et al., 2012
Student Peer Mentors	$80	4.5% more likely in four-year institutions	Castleman and Page, 2013
Counselling via College Access Organization	$115	8% increase in on-time enrolment of low-income students	Castleman et al., 2014
Text Messaging	$7	5% increase in enrolment in two-year colleges	Castleman and Page, 2014
	?	3% increase in four-year institutions	Page et al., 2020
	$5-$10	~ 15% increase for low-income and first-generation students	DeBaun and Keller, 2021
Text Messaging with Counsellor Follow-up	$48	5-15% increase; especially for students going to four-year institutions	Castleman et al., 2014
	$125	1.4 times more likely to enrol	Tackett et al., 2018
PSI-Branded Chatbot	varies?	up to 22% increase	Viano, 2023

DO STUDENTS EXPERIENCE SUMMER MELT IN CANADA?

No Canadian studies on summer melt per se have been found. This absence can be explained by both the lack of publicly available studies on the topic and by the difference in terminology. Canadian sources typically use the term "transition to post-secondary" (Gallagher-Mackay & Brown, 2021; Heslop, 2022; Robson et al., 2021). For example, Robson et al. (2021) tracked the transition to post-secondary for two high school cohorts in Toronto by linking high school data from Toronto District School Board, and the data from Ontario Universities' Application Centre (OUAC) and Ontario College Application Service (OCAS). The researchers examined four outcomes of transitioning – confirming a place in a university, confirming a place in a college, unsuccessful application, and no application. The researchers discussed the transition to post-secondary for different groups of students, likely with the assumption that confirmed offers translated into consecutive enrolment. However, the absence of post-secondary data in the study did not allow for conclusions about the extent of possible summer melt, i.e., the number of students with successful applications and accepted offers but failing to enrol into their post-secondary program in the fall.

British Columbia's Student Transitions Project (STP) tracks immediate and delayed transitions of high school graduates to BC public post-secondary education (Ministry of Post-Secondary Education and Future Skills, N.d.). Students in the "immediate transition" category enrol into post-secondary education within one year of high school graduation. This definition makes the group the closest to measure the extent of summer melt according to the summer melt definition in American studies. However, the term "summer melt" is limited to students who are accepted to post-secondary and expected to enrol in the fall semester only, thus precluding comparison.

The STP delayed-entry transitions track students who are first enrolled into post-secondary after more than a year. According to the STP findings, 14.8% of high school graduates delayed their entry to post-secondary for one to three years (Heslop, 2022). Some of the delayed-entry students may have experienced summer melt if they got admitted right after high school but delayed enrolling. In American studies, the proportion of students who experienced summer melt but were enrolled in a post-secondary institution later was non-trivial. Holzman and Hanson (2020) reported that around 20% of students who experienced summer melt were enrolled in post-secondary within two years of high school graduation. Similar findings were reported in a study that focused specifically on rural students (Ruffin, 2020).

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At the system-level, it is currently impossible to estimate the extent of the summer melt (i.e., the proportion of accepted students who do not enrol in the fall) in BC public post-secondary intuitions because the STP does not contain applicant/application data. Pooling applicant and registrant data among peer post-secondary institutions was done by four BC public research-intensive universities in the 1990s (J. Heslop, personal communication, April 12, 2024), but the research did not extend to all public post-secondary institutions in the province. A possible system-wide study on the summer melt might become possible when the application data available from the BC system-level application platform EducationPlannerBC (Government of British Columbia, 2020) can be linked to the application decision data from BC public post-secondary institutions, or to post-secondary enrolment data in the STP.

Overall, an analysis of linked application and post-secondary data could close the knowledge gap on the summer melt in Canada. Canadian jurisdictions, where system-level application and post-secondary transition tracking is available, have an opportunity to engage in such research on the system level. The American findings on the institutional strategies to minimize summer melt should be applicable in both USA and Canada, and could support future institutional studies on the phenomenon.

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