



Summer Melt: College Intentions vs. College Enrollment of 2020-21 School District of Philadelphia Seniors

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Key Findings

- Overall, **the summer melt rate for SDP 12th graders in 2020-21 was 35.9%**, nearly identical to the summer melt rate for 2019-20 SDP 12th graders (36.2%). These rates are higher than pre-pandemic rates (31.5% for 2018-19 SDP 12th graders).
- As in previous years, male students, students who identify as Black/African American or Hispanic/Latinx, students receiving special education services, and students designated as economically disadvantaged had higher summer melt rates than their peers.
- Positive experiences with adults and school counselors in high school continue to be associated with lower summer melt rates.

What is Summer Melt?

Research has found that many high school graduates who intend to enroll in post-secondary education do not follow through with their intentions following the summer after high school graduation.¹ This pattern, found among 10-40% of high school graduates nationally, is known as **summer melt**.²

Each year, the Office of Research and Evaluation (ORE) examines the summer melt rates of the most recent cohort of School District of Philadelphia (SDP) high school seniors.³ As with prior years, college intention was identified via the 2021 Senior Exit Survey, which is mandated by the Pennsylvania Department of Education to be offered to all high school seniors.⁴ The Senior Exit Survey asks students whether they are planning to pursue additional education, employment, or other activities after high school; about their high school activities; and the types of support they received in college and career planning.

¹ This group includes students who intended to matriculate to a post-secondary institution immediately but also some who may plan to enroll at any point within 1 year of graduation.

² Castleman, B. L., Page, L. C., & Snowdon, A. L. (2013). *Summer Melt Handbook: A Guide to Investigating and Responding to Summer Melt*. Harvard University Center for Education Policy Research.

³ For reports on Summer Melt for prior cohorts see: (2019-20) <https://www.philasd.org/research/wp-content/uploads/sites/90/2021/07/Summer-Melt-2020-Brief-July-2021-Revised-2.pdf> AND (2016-17 through 2018-19) <https://www.philasd.org/research/wp-content/uploads/sites/90/2020/10/Summer-Melt-College-Intentions-vs-College-Enrollment-of-SDP-Seniors-Research-Brief-October-2020.pdf>

⁴ For more information about the Senior Exit Survey, see: [Senior Exit Survey Results: District Level Report](#)

Summer Melt in the Context of COVID-19

SDP ORE studies of high school graduates in 2017-2020 found that the percentage of SDP seniors who intended to pursue post-secondary education ranged from 85% to 88%, but the rate declined to 82% in 2019-20, and further declined to 77% for 2020-21 seniors, the lowest rate in the past decade.⁵ This pattern mimics the national decline in college matriculation in the fall 2020 and spring 2021 semesters.⁶ While summer melt in SDP has consistently hovered near 30% of seniors intending to pursue post-secondary education but not following through with their intentions, there was an increase from 31.5% in 2018-19 to 36.2% in 2019-20. The summer melt rate changed little in 2020-21, at 35.9%.

To examine whether the COVID-19 pandemic affected the plans of SDP high school seniors, in 2019-20 the Senior Exit Survey included questions about changes in students' plans before and after the start of the pandemic. The same questions were asked of 2020-21 seniors, as most of them experienced the onset of the pandemic and school closures not only in their junior year, but also continuously throughout their senior year.

Over a quarter of 2019-20 respondents (26.3%) stated their post-graduation plans had changed because of the virus, and that rate increased to 28.2% in 2020-21. While attending school later than originally planned was the most common change in plans for 2019-20 seniors (indicated by 36.4%), the most frequently-cited change of plans among 2020-21 seniors was attending a different school than originally intended (34.9%).

Research Questions

This brief explores the following research questions for the SDP senior class of 2021:

1. What was the summer melt rate for college-intending 2021 SDP high school seniors? Did it vary among student demographic groups?
2. In the context of the ongoing COVID-19 pandemic and school closures, did summer melt rates change from previous years?
3. Based on students' responses on the Senior Exit Survey, what are some high school experiences associated with a reduction in the odds of summer melt?

⁵ [Summer Melt 2020 College Intentions vs. College Enrollment of 2020 School District of Philadelphia Seniors](#)

⁶ National Clearinghouse Research Center (2021). [Stay Informed with the Latest Enrollment Information](#). National Student Clearinghouse.

Methods

We used the spring 2021 Senior Exit Survey to identify 2020-21 seniors who had the intention of pursuing post-secondary education upon graduating from high school. At the end of the fall semester of 2021, we matched these students against the National Student Clearinghouse (NSC) college matriculation data to identify which students followed through with their intentions. Finally, we analyzed students' responses on the Senior Exit Survey to identify high school experiences associated with reduced summer melt.

Response Rate and Representativeness of the Sample

While historically the response rate to the Senior Exit Survey has hovered around 70% of exiting seniors, the spring 2020 response rate declined to 52.9% in the aftermath of school closures in response to the COVID-19 pandemic. However, the spring 2021 response rate recovered somewhat, increasing over ten percentage points to 63.1%.

The 2020-21 Senior Exit Survey respondents were more representative of seniors than 2019-20 respondents but less representative than the (pre-pandemic) 2018-19 respondents. Compared with the pool of all 12th graders, 2020-21 survey respondents were less likely to be students identified as male (-5.3 percentage points), Hispanic/Latinx (-1.9 percentage points), or receiving special education services (-5.2 percentage points).⁷

What We Found

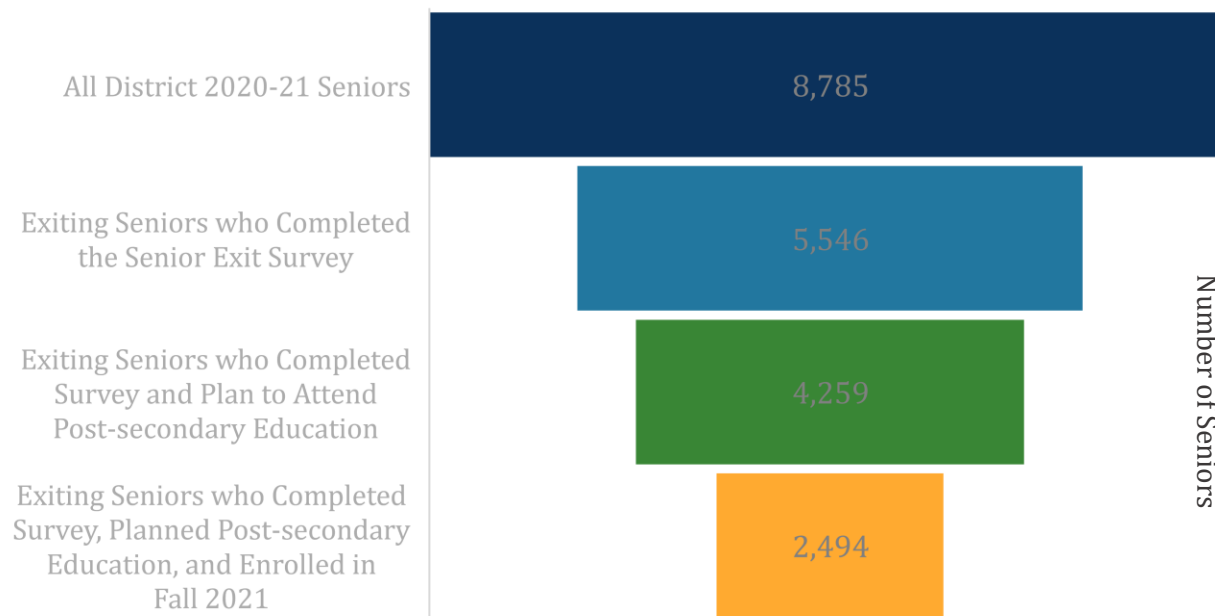
More than one in three seniors (35.9%) who intended to enroll in post-secondary education did not follow through with their intentions by the end of fall 2021.

The Senior Exit Survey was offered to 8,785 District seniors in spring 2021. Of those students, 5,546 seniors completed the survey (63.1% response rate). Of the students who completed the survey, 4,259 students (76.8%) expressed their intent to pursue post-secondary education after high school, which included two-year colleges, four-year colleges, and trade/technical schools (Figure 1). The majority of these students did graduate from high school (only 370 of the students who took the Senior Exit Survey and planned further education did not graduate in spring of 2021). Of the remaining students, 2,494 of the students who intended to enroll matriculated in fall 2021, and 1,386 did not.⁸

⁷ [Senior Exit Survey Results: District Level Report](#)

⁸ Based on the NSC data provided to SDP in January 2022

Figure 1. College intention and enrollment of 2021 Senior Exit Survey respondents



Source: Qlik Senior Exit Survey App, retrieved on March 9, 2022

Summer melt rates in 2021 varied by demographic groups.

Overall, the District summer melt rate in 2021 (35.9%) was very similar to that of 2020 graduates (36.2%), only decreasing by -0.3 percentage points. However, this rate varied for different demographic groups, and these variations were consistent with findings from previous years. For instance, college-intending male students had a higher summer melt rate than female students (41.3% vs. 32.4%). College-intending Hispanic/Latinx students had a summer melt rate of 51.7%, compared to 42.0% for Black/African American students and 24.8% for white students. College-intending English Learners (ELs) had much higher summer melt rates than non-English Learners (52.4% vs. 34.4%), and college-intending students identified as economically disadvantaged had higher summer melt rates than students who were not identified as economically disadvantaged (27.0% vs. 41.8%) (Table 1).

The protraction of the COVID-19 pandemic may have affected certain subgroups more than others, as summer melt rates in 2021 recovered most dramatically for Asian students (-4.0 percentage points), White students (-6.8 percentage points), and Multi-Racial/Other students (-6.5 percentage points) while the summer melt rates for Black/African American and Hispanic/Latinx students continued to increase (+1.4 percentage points, +4.4 percentage points) (Table 1). This pattern is a return to the disparities seen before the onset of the pandemic and school closures.⁹

⁹ [Summer Melt: College Intentions vs. College Enrollment of SDP Seniors \(2016-17 through 2018-19\)](#)

Table 1. District-wide summer melt rates by demographic groups

		Intended	Enrolled	Summer melt rate (%)	Summer melt rate change from 2019-20 to 2020-21 (percentage points)
Overall		3,889	2,494	35.9%	-0.3
Sex	Female	2,344	1,579	32.4%	-0.8
	Male	1,545	915	41.3%	+0.6
Race / Ethnicity	Asian	594	525	12.0%	-4.0
	Black/African American	1,971	1,144	42.0%	+1.4
	Hispanic/Latinx	613	293	51.7%	+4.4
	Multi-Racial/Other	133	93	29.8%	-6.5
	White	578	439	24.8%	-6.8
English Learner	No	3,555	2,331	34.4%	-0.5
	Yes	334	163	52.4%	+1.7
Receiving Special Education Services	No	3,764	2,449	34.9%	+1.3
	Yes	125	45	66.4%	-0.8
Economically Disadvantaged	No	1,541	1,116	27.0%	-2.7
	Yes	2,348	1,378	41.8%	+0.1

Note: The far-right column presents year-over-year change in the summer melt rate for 2019-20 seniors compared to 2020-21 seniors. A plus sign indicates an increase in summer melt for 2020-21 seniors as compared to the 2019-20 seniors. This table does not include the 370 seniors who completed the survey and intended further education but did not graduate in spring 2021.

Source: Qlik Senior Exit Survey App, retrieved on March 9, 2022

While the overall summer melt rate did not alter significantly from the previous year, certain subgroups did see sizable changes both in the positive and negative direction. In previous years, female students have tended to have lower summer melt rates than male students, but spring 2020 female students experienced a higher one-year increase in summer melt in fall 2020 (+6.7 vs. +2.7 percentage points). However, in 2021 the summer melt rate for female students recovered slightly, while summer melt rates continued an upward trend for male students of most race/ethnicity and other subgroups (Table 2). Female students of most race/ethnicity and EL status subgroups saw an improvement in their summer melt rates, although the rate for female students receiving special education services increased by more than eight percentage points.

Summer melt rates decreased from the previous year for male students receiving special education services and who identified as Multi-Racial or other racial/ethnic backgrounds; however, both of these groups represent a small number of students. While summer melt rates increased for nearly all subgroups in spring 2020, narrowing the gaps between students of different races or ethnicities, certain pre-pandemic disparities reemerged for spring 2021 graduates. Summer melt rates in 2021 increased for Black/African American and Hispanic/Latinx students no matter their gender.

Table 2. There was an increase in summer melt rates for nearly all student subgroups

		Female Students (N=2,549)		Male Students (N=1,710)	
		Summer melt rate (%)	Summer melt rate change from 2019-20 to 2020-21 (percentage points)	Summer melt rate (%)	Summer melt rate change from 2019-20 to 2020-21 (percentage points)
Overall		32.4%	-0.8	41.3%	+0.6
Race / Ethnicity	Asian	10.0%	-7.9	14.1%	+0.2
	Black/African American	37.6%	+1.8	49.9%	+1.1
	Hispanic/ Latinx	46.6%	+3.9	58.9%	+4.9
	Multi-Racial/Other	23.2%	-8.8	37.1%	-4.4
	White	20.9%	-7.4	30.5%	-5.5
English Learner	No	31.0%	-0.6	39.6%	-0.1
	Yes	49.1%	-2.6	55.9%	+6.3
Receiving Special Education Services	No	31.4%	0.0	40.3%	+3.3
	Yes	70.9%	+8.4	62.9%	-7.9

Note: The far-right column presents year-over-year change in the summer melt rate for 2019-20 seniors compared to 2020-21 seniors. A plus sign indicates an increase in summer melt for 2020-21 seniors as compared to the 2019-20 seniors.

Source: Qlik Senior Exit Survey App, retrieved on March 9, 2022

District summer melt rates were again substantially higher for students who planned to attend two-year institutions (67.7%) as compared to students who planned to enroll at four-year institutions (15.1%). Of students planning to attend four-year institutions, the only race/ethnicity subgroups who saw an increase in their summer melt rates were Black/African American (+1.0 percentage points) and Hispanic/Latinx (+0.7 percentage points) students (Table 3).

All race/ethnicity subgroups of students planning to attend two-year institutions continued to have very high summer melt rates of at least 60%, with the exception of students who identified as Asian (37.0%). Students identifying as Hispanic/Latinx continued to have the highest summer melt rates, no matter the type of institution they planned to attend.

Table 3. There was an increase in summer melt rates for students intending to attend two-year institutions

		Two-year Institutions		Four-year Institutions	
		(N=1,847)		(N=2,412)	
		Summer melt rate (%)	Summer melt rate change from 2019-20 to 2020-21 (percentage points)	Summer melt rate (%)	Summer melt rate change from 2019-20 to 2020-21 (percentage points)
Overall		67.7%	+1.1	15.1%	-2.0
Race / Ethnicity	Asian	37.0%	-0.7	5.2%	-4.9
	Black/African American	72.7%	+1.6	19.6%	+1.0
	Hispanic/Latinx	70.8%	+2.3	24.5%	+0.7
	Multi-Racial/Other	62.8%	+4.5	13.6%	-8.2
	White	61.2%	-3.3	8.5%	-8.0

Note: Students who did not answer this question on the Senior Exit Survey were excluded from this analysis. Not all data for matriculation are currently available or provided to the NSC and SDP. The summer melt rate change columns present year-over-year change in the summer melt rate for 2020-21 seniors compared to 2019-20 seniors. A plus sign indicates an increase in summer melt for 2020-21 seniors as compared to the 2019-20 seniors.

Source: Qlik Senior Exit Survey App, retrieved on March 9, 2022

Starting with the 2019-20 Senior Exit Survey, questions were added to better capture the implications of future plans that combine postsecondary education with potentially competing demands. Students who indicated that they planned to continue their education after high school were further asked whether they intended to be a part-time or full-time student. In 2020-21, of the 3,910 respondents who said they intended to pursue further education, 19% indicated they intended to attend school part-time (with 54% of these intending to attend a two-year institution). However, only 23% of these students matriculated in fall 2021, compared to 51% of those who planned to attend full-time (Table 4). Those most likely to matriculate were students who planned to enroll at a four-year institution full-time, a continuation in the disparities between students planning part-time versus full-time attendance from the previous year.

Table 4. Summer melt and matriculation for part-time vs. full-time students

	Planned Part-Time Attendance		Planned Full-Time Attendance	
College-intending (all)	744	19%	3166	81%
College-intending (2-year institution)	405	54%	666	21%
Summer melt (2-year institution)	302	75%	309	46%
Matriculation (2-year institution)	95	23%	342	51%
College-intending (4-year institution)	112	15%	2230	70%
Summer melt (4-year institution)	55	49%	295	13%
Matriculation (4-year institution)	55	49%	1922	86%
Matriculation for all post-secondary institution types	160	22%	2309	73%

Note: Students who did not answer one or both of these questions on the Senior Exit Survey were excluded from this analysis. Not all data for matriculation is currently available or provided to the NSC and SDP.

Source: Qlik Senior Exit Survey App, retrieved on March 2, 2022. Matriculation data provided by NSC.

Positive high school experiences, such as having adults at school helping with college applications and positive relationships with counselors, are associated with a reduction in summer melt rates.

In previous years, analyses have consistently shown associations between lower summer melt rates and whether students self-report receiving post-graduation planning supports during high school. There are also student groups and characteristics that are consistently associated with higher or lower summer melt rates. We repeated this analysis with the 2020-21 12th grade cohort. The 370 college-intending students who did not graduate in spring 2021 were excluded from the analysis, as were other students with one or more missing data points, which reduced our final analytic sample (n=4,037).

The results of this analysis are completely consistent with results from prior years, and are reported in Table 5. Consistent with results in Table 1, we confirmed that students who identify as male, Black/African American or Hispanic/Latinx, ELs, students receiving special education services, and students with economically disadvantaged status have higher likelihoods of summer melt compared with their peers.

We again found that adult support during the college application process and with school counselors in planning for life after high school were associated with reduced summer melt, even after controlling for demographic variables. Students who strongly agreed with the statement, “Adults at my school gave me help in applying for college” were less likely to experience summer melt than students who did not (OR=0.64). Similarly, students who identified a “School Counselor” as one of the most important people in planning life after high school were less likely to experience summer melt than students who did not (OR=0.69).

Our findings continue to support the position that efforts focused on building strong adult support in the college application process and with school counselors in planning life after high school may reduce summer melt rates for District seniors intending post-secondary education.

Table 5. Results of logistic regression: Certain demographics are more likely to experience summer melt while school interventions can decrease summer melt rates

	Odds Ratio (OR) ^a
Associated with higher odds of summer melt	
Male	1.45***
Black/African American	2.18***
Hispanic/Latinx	3.24***
English Learner	2.05***
Receipt of Special Education Services	3.19***
Economically Disadvantaged	1.18***
Associated with lower odds of summer melt	
Asian	0.41***
Adults at my school gave me help in applying for college (Answered: <i>Strongly agree</i>) ^b	0.64**
Most important person in planning for life after high school (Selected: <i>School Counselor</i> as one of the responses) ^b	0.69***

*** p<0.01, ** p<0.05

^a The odds ratio reported in the second column estimates the change in the odds of experiencing summer melt for the group identified in the first column compared to students who are not in that group. An odds ratio greater than 1 indicates that students' characteristics specified in column 1 are associated with an increased likelihood of summer melt than students not in that group, while an odds ratio less than 1 suggests a reduced likelihood of summer melt. For example, in this model, the odds ratio of 1.45 for the male student variable is interpreted as the following: the odds of a male student experiencing summer melt is 1.45 times the odds of a female student experiencing summer melt, controlling for all the other variables included in the model.

^b Only college-intending students who successfully graduated from high school and had no missing data in these Senior Exit Survey questions on high school experiences were included in the regression analysis for these variables (n=3,837).

Why is this Important to SDP?

Preparing our students for college and career is a core priority of SDP.¹⁰ By assessing District-wide summer melt, we can better understand facilitators and barriers for students to matriculate in higher education, given the intention to do so during the last semester of high school. This information can also be useful for the District's multiple college readiness partners as they work to allocate resources and refine programming. Moreover, by connecting summer melt with student responses on the Senior Exit Survey, we have revealed a consistent connection between supportive adults in schools and decreased summer melt rates.

¹⁰ For example, post-graduation readiness underlies Board Goals 4 and 5. For more information on the Board Goals and Guardrails, see: <https://www.philasd.org/era/goals-and-guardrails/>