



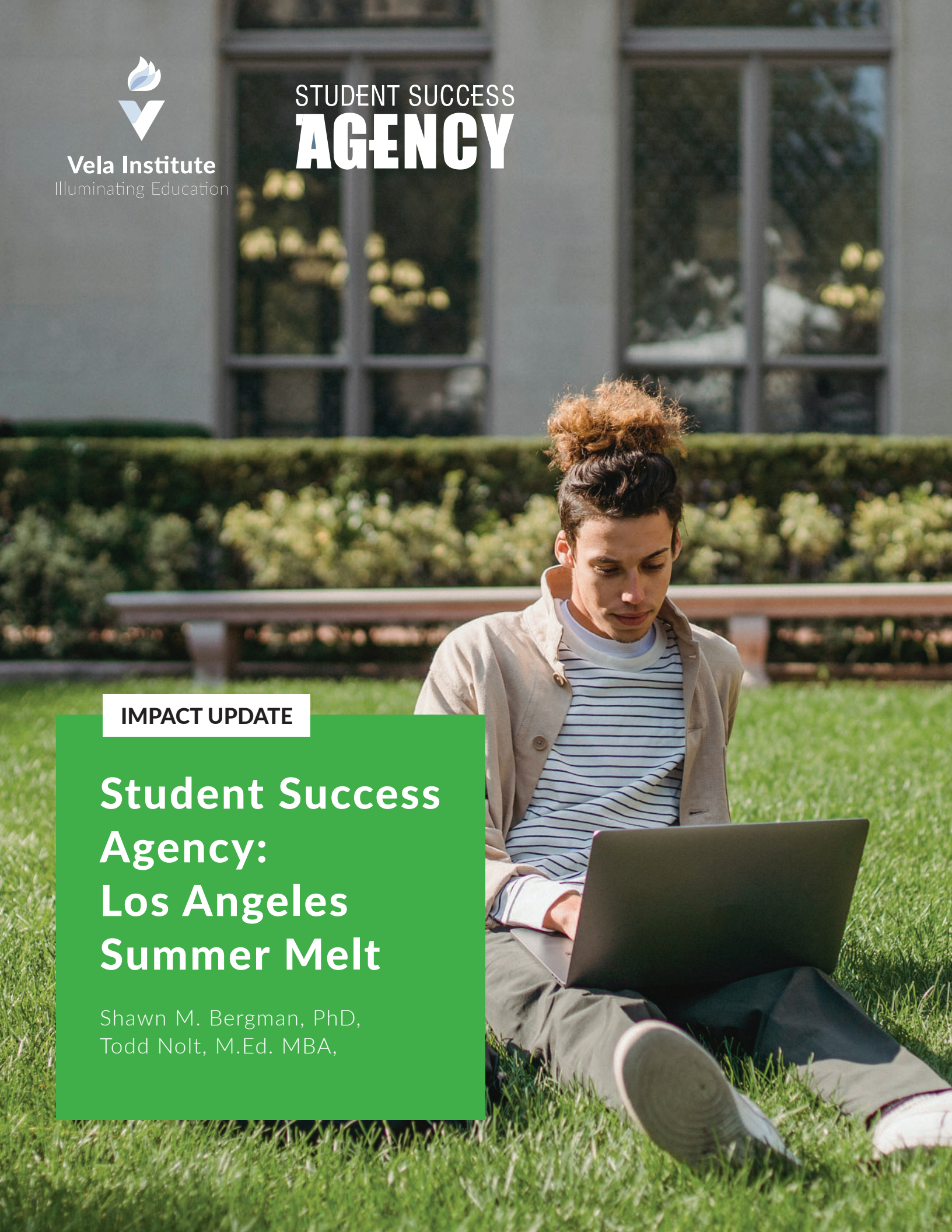
Vela Institute
Illuminating Education

STUDENT SUCCESS **AGENCY**

IMPACT UPDATE

Student Success Agency: Los Angeles Summer Melt

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About Vela Institute

Vela Institute is a non-profit organization dedicated to increasing access to evaluation, analytics, and data tracking to education partners to improve student and community outcomes. Established in 2017, Vela Institute accomplishes its mission through applied research, data analytics, and the use of evidence-based practices.

This impact update of Los Angeles SSA was conducted at the request of Student Success Agency.

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Executive Summary

The Student Success Agency (SSA) began serving high school seniors enrolled in Los Angeles, California high schools in May of 2018 and, for those enrolled, into their first year of post-secondary education.

This report is an update of the original analysis that assessed an intervention to reduce “summer melt,” and in this specific analysis, the relationship between SSA mentoring services provided to students during “the summer (referred to as SSA engagement)” and fall post-secondary enrollment. Vela received additional student-level data from the GEAR UP 4 LA (GU4LA) for the 2018 graduating class and this information was used as a statistical control in reexamining the relationship between SSA engagement and postsecondary enrollment which is documented in this impact update.

The updated results show that the SSA engagement continued to have a meaningful relationship with fall postsecondary enrollment after controlling for student background factors. The updated results, however, suggest that to help reduce “summer melt,” this engagement needs to be throughout the entire summer (i.e., Fully Engaged is defined by ongoing engagement from May through August) and not just toward the end of the summer leading into the fall semester (i.e., Late Engaged is defined as engagement only in August). Fully Engaged students had higher fall postsecondary enrollment rates compared to Late Engagement students and students who did not engage with an SSA agent. There was no difference between Late Engagement students and those who did not engage with an SSA agent after accounting for student background factors.

Project Background

Each year far too many college-intending high school graduates fail to enroll in post-secondary education the fall following their senior year. This phenomenon known as “summer melt” has been researched and documented in previous studies.¹

This impact update is part of a larger project and a follow up to the original analysis by Vela Institute that examined how mentoring services provided by Student Success Agency (SSA) during the summer of 2018 following high school graduation related to post-secondary enrollment². As with the original project, this updated analysis was not intended to replicate summer melt research or a previously conducted study. Instead, it assesses the relationship between SSA mentoring services received during a period of known “summer melt” and fall post-secondary enrollment rates.

The Student Success Agency (SSA) began serving high school seniors enrolled in Los Angeles, California high schools in May of 2018. These students were served through the summer of 2018 and, for those enrolled, into their first year of post-secondary education. For this analysis, Vela received additional student-level data from the GEAR UP 4 LA (GU4LA) for this graduating class. The additional information allowed Vela to update the initial analyses to provide a more detailed description of the engagement groups identified in the LA Melt project and allowed for this student-level information to act as a statistical control in the analyses examining the relationship between SSA engagement and postsecondary enrollment.

¹Castleman, B. L., & Page, L. C. (2014). A trickle or a torrent? Understanding the extent of summer “melt” among college-intending high school graduates. *Social Science Quarterly*, 95(1), 202-220.

²Bergman, S.M., Nolt, T., Hawkins, M., & Wilson-Kearse, J. (2020). *Student Success Agency Evaluation of Impact: Los Angeles Summer Melt*. Boone, NC: Vela Institute.

SSA Engagement Groups

To categorize data into SSA engagement groups for this analysis, Vela included data from 1503 students who graduated in 2018 from Los Angeles, California high schools in May of 2018 were included in the study. The sample included only those students for whom SSA provided information regarding the student's engagement with SSAs agents and GU4LA had school, gender, household education level, race-ethnicity, daily attendance rates, and GPA data.

Vela used a series of unsupervised classification algorithms to categorize students based on their patterns of engagement with their respective SSA agents throughout the summer performance period (i.e., May 2018 - August 2018). These algorithms examined the frequency of total contacts with SSA agents through text messaging, email, and phone calls. Results indicated that classifying students who were consistently in the upper three quartiles of monthly engagements with the SSA mentors as Fully Engaged and students who were consistently in the lower quartile of engagements as Late Engaged provided the best fit to the data. Students who did not have any contacts with an SSA agent were categorized as Non-Participants.

The three groups resulted from this process were used for the project analyses and were defined as the following:



Fully Engaged

356 Students who showed interest in engaging with SSA, signed up with an agent, and consistently interacted with their SSA agent through the summer 2018 (i.e., May 2018 - August 2018).



Late Engaged

441 Students who showed interest in engaging with SSA, signed up with an agent, but only interacted with their SSA agent toward the end of summer 2018 (i.e., only in August 2018).



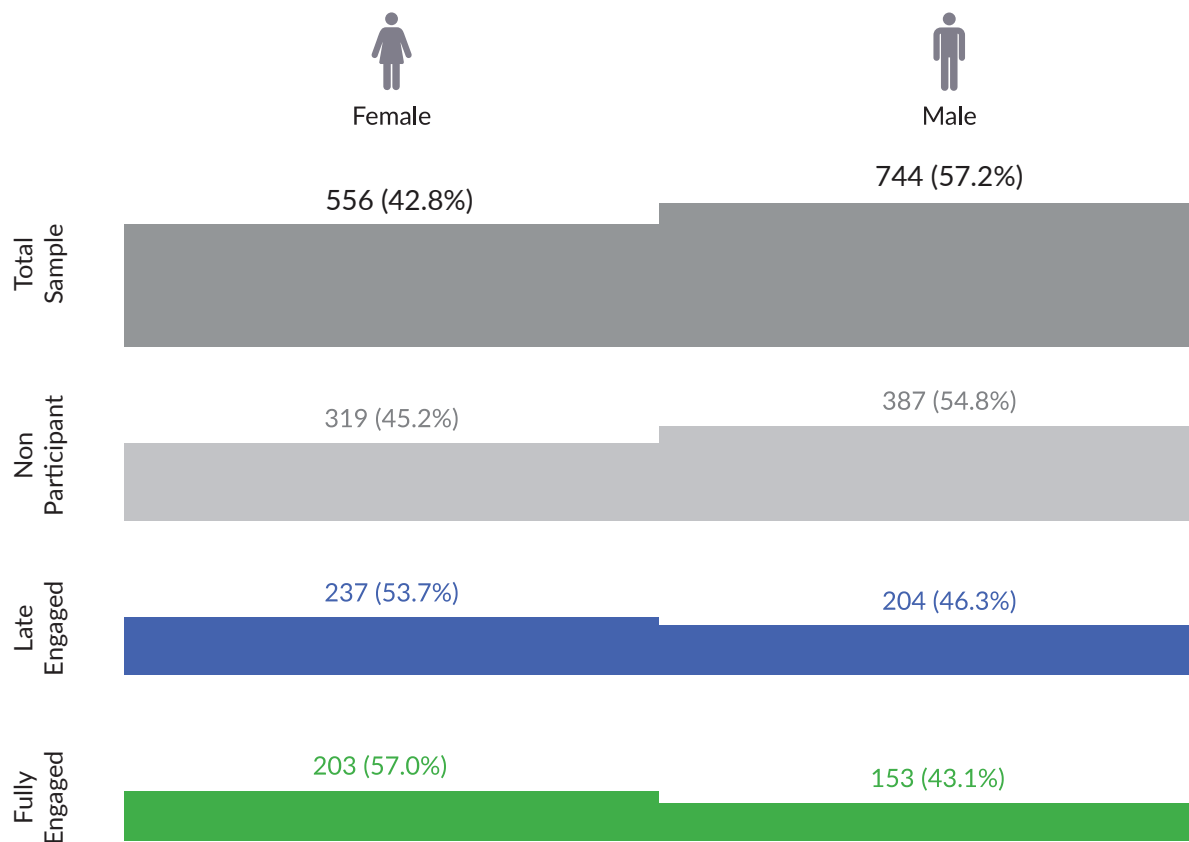
Non-Participant

706 Students who never engaged or interacted with an SSA agent.

Student-Level Data

The addition of student level-data received from GU4LA provided deeper insight into how SSA services are being utilized by different student groups. The tables below show the breakdown of participation by gender, household education level, race-ethnicity, daily attendance rates, and GPA. Students who did not have Spring 2018 weighted GPA reported were not included in this analysis³.

Figure 1: SSA Engagement by Gender



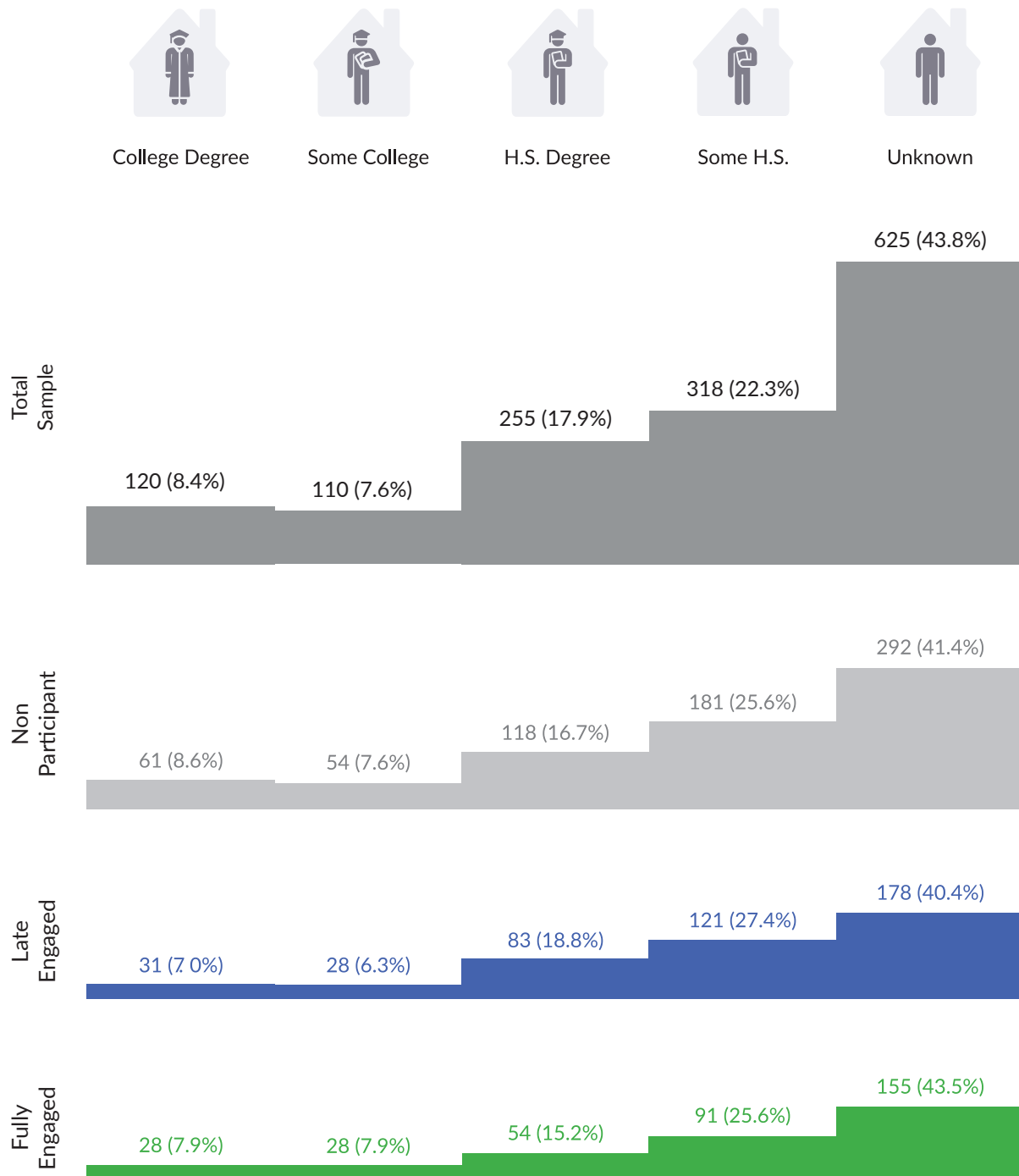
Key Takeaways:

As shown in Figure 1, Non-Participants were more likely to be male students with 54.8% of students the sample who did not engage or interact with an SSA agent being male⁴. Female students were more likely to be in the Late Engaged (53.7% of Late Engaged students) and Fully Engaged (57.0% of the Fully Engaged students) groups compared to male students.

³ One hundred and seventy-one students for whom no GPA data was available were not included in this analysis.

⁴ Chi-square test of association indicated a difference between the SSA Engagement groups and students gender identify, $\chi^2(2)=15.9$ $p<.001$.

Figure 2: SSA Engagement by Household Education

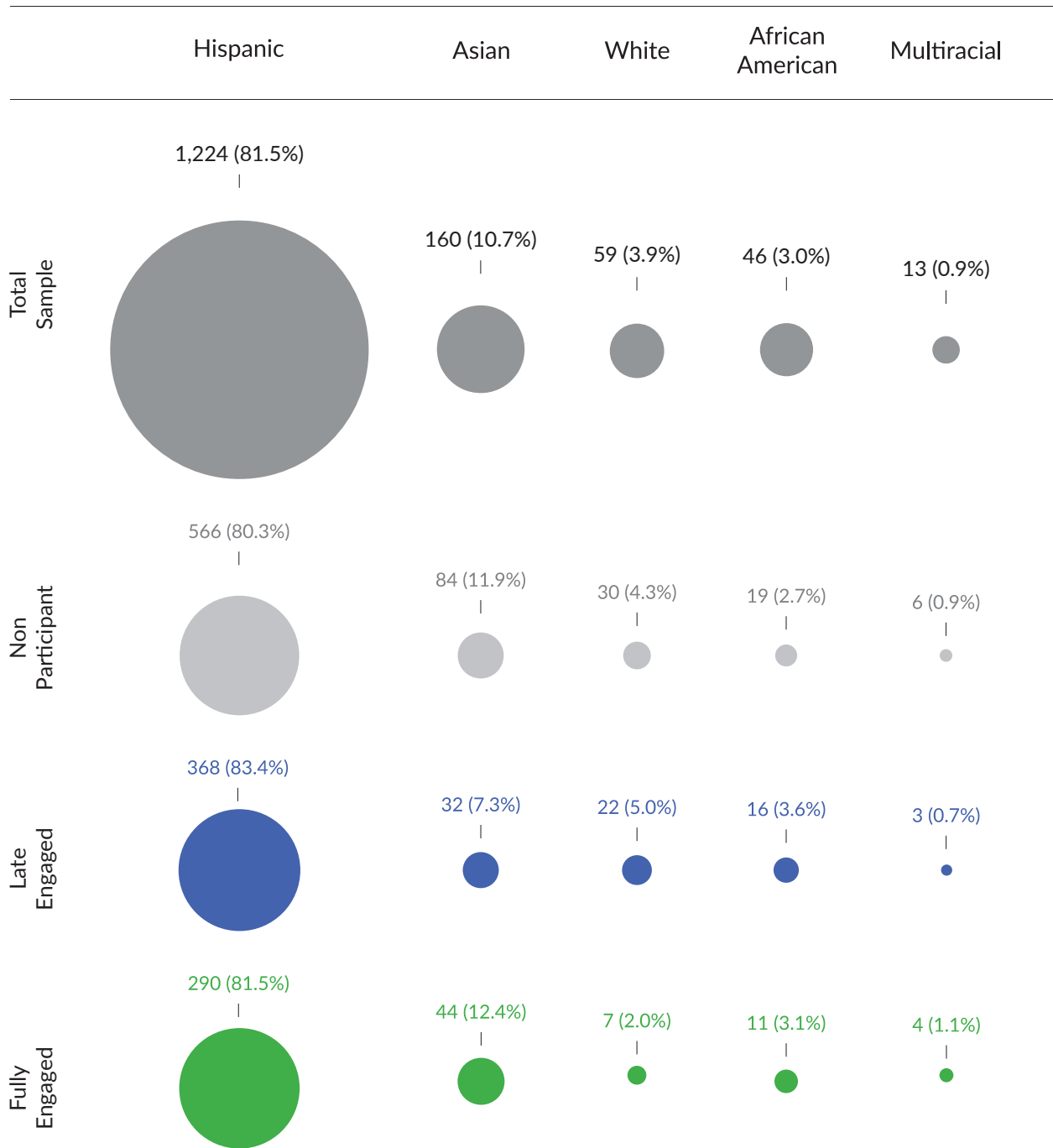


Key Takeaways:

As shown in Figure 2, there were no appreciable differences between the SSA Engagement groups and household education level⁵. This indicated the proportion of household education level was equivalent across the three SSA Engagement groups.

⁵ Chi-square test of association indicated a difference between the SSA Engagement groups and students household education level, $\chi^2(8)=4.2$ $p=.839$.

Figure 3: SSA Engagement by Race and Ethnicity

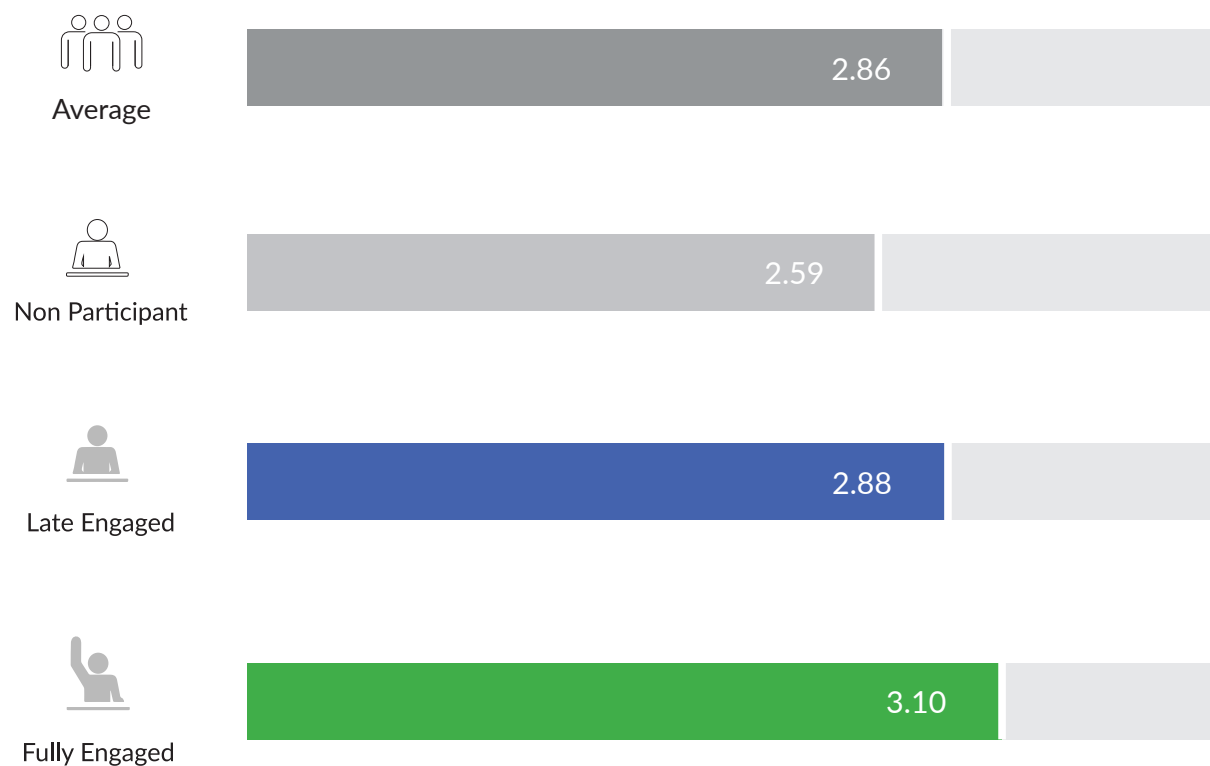


Key Takeaways:

As shown in Figure 3, there were no appreciable differences between the SSA Engagement groups and students' race and ethnicity⁶. This indicated that the three SSA Engagement groups had approximately the same race and ethnicity composition in the current sample.

⁶Chi-square test of association indicated a difference between the SSA Engagement groups and students household education level, $\chi^2(8)=13.3$ $p=.102$.

Figure 4: GPA by Engagement Group



Key Takeaways:

As shown in Figure 4, there were meaningful differences in the average GPA between the three SSA Engagement groups⁷. More specifically, Fully Engaged students tended to have higher GPAs (3.10) compared with both Late Engaged (2.88) and Non-Participant (2.59) students.

Additionally, Late Engaged students tended to have higher GPAs compared with Non-Participant students. These results indicated that students with higher academic performance were more likely to sign up and engage with SSA mentors. Students with stronger academic performance were more likely to sign up early and engage with an SSA mentor.

⁷A one-way ANOVA that did not assume homogeneity of variance and Games-Howell post-hoc tests indicated there was a meaningful difference in GPA between the SSA Engagement groups, Welch's $F(2,908)=49.1, p<.001$. Post-hoc analyses indicated that Fully Engaged students had an average GPA higher than both the Non-Participant and Late Engagement group. Further post-hoc analyses indicated the Late Engagement group had average higher GPA compared with the Non-Participant group.

Figure 5: Daily Attendance Rate by Engagement Group



Key Takeaways:

As shown in Figure 5, there were meaningful differences in the average attendance rating between the three SSA Engagement groups⁸. More specifically, Fully Engaged students tended to have higher attendance (95.77) compared with both Late Engaged (94.65) and Non-Participant (91.21) students. Additionally, Late Engaged students tended to have more consistent attendance compared with Non-Participant students. These results indicated that students with better attendance records were more likely to sign up and engage with SSA mentors early.

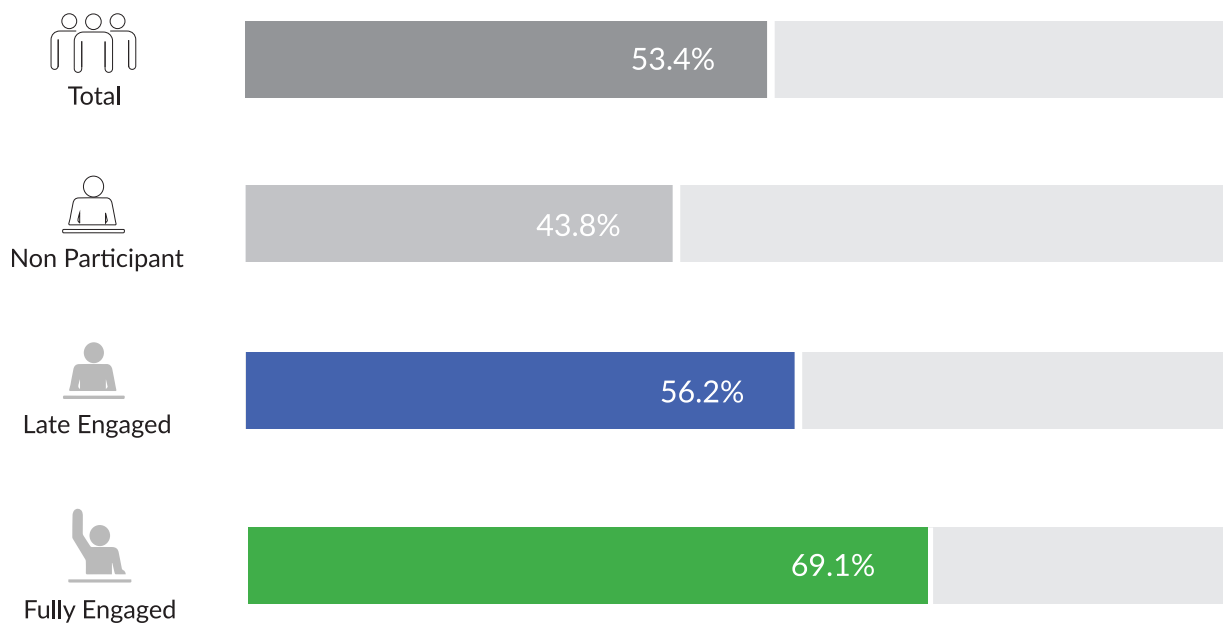
⁸A one-way ANOVA that did not assume homogeneity of variance and Games-Howell post-hoc tests indicated there was a meaningful difference in the attendance ratings between the SSA Engagement groups, Welch's $F(2,908)=45.5, p<.001$. Post-hoc analyses indicated that Fully Engaged students had a higher average attendance rate than both the Non-Participant and Late Engagement group. Further, post-hoc analyses indicated the Late Engagement group had average higher attendance rate compared with the Non-Participant group.

SSA Engagement and Fall Post-Secondary Enrollment

This impact update reexamines the relationship between SSA services and fall postsecondary enrollment following a summer of SSA mentoring and controls for student-level background information⁹. Previous analysis (2020)¹⁰ found that students who were fully engaged throughout the summer with an SSA mentor were 1.4 times more likely to enroll compared with students who engaged late in the summer and 2.0 times more likely to enroll compared with students who did not participate. Students who engaged late in the summer were 1.5 times more likely to enroll compared with students who did not participate.

Figure 6: PSE Fall Enrollment Rates by Engagement Group

Results presented in the figure below statistically control for school attended, gender, household education level, race-ethnicity, daily attendance rates, and GPA



Key Takeaways:

The relationship between SSA Engagement groups and postsecondary enrollment was re-examined in this impact update to statistically control for student school attended, gender, household education level, race-ethnicity, daily attendance rates, and GPA data. Controlling for these additional variables provided a better understanding of the relationship between SSA services and the fall enrollment outcome by exploring this relationship over and above these student characteristics. The updated results show that the SSA Engagement continued to have a meaningful relationship with fall postsecondary enrollment even after controlling for these background factors¹¹.

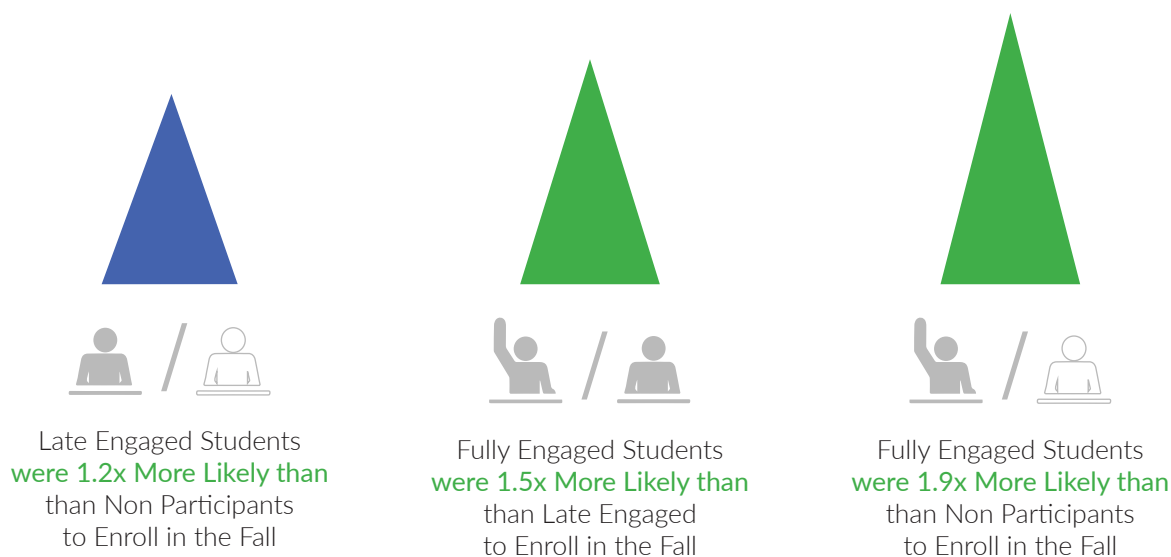
⁹The updated analyses in this report in brief conducted a multiple binomial regression using SSA Engagement group member as a predictor and school, gender, household education level, race-ethnicity, daily attendance rates, and GPA as covariates.

¹⁰Bergman, S.M., Nolt, T., Hawkins, M., & Wilson-Kearse, J. (2020). Student Success Agency Evaluation of Impact: Los Angeles Summer Melt. Boone, NC: Vela Institute.

¹¹The omnibus likelihood ratio test for the SSA Engagement Group variable in the from the multiple binary logistic regression indicated that SSA had a meaningful relationship with fall postsecondary after controlling for student school attended, gender, household education level, race-ethnicity, daily attendance rates, and GPA, $\chi^2(2)=15.44$ $p<.001$.

Figure 7: PSE Fall Enrollment Likelihood by Engagement Group

Results presented in the figure above statistically control for school attended, gender, household education level, race-ethnicity, daily attendance rates, and GPA



Key Takeaways:

As shown in Figures 6 and 7, students who were fully engaged throughout the summer with an SSA mentor were 1.5 times¹² more likely to enroll compared with students who engaged late in the summer and 1.9 times¹³ more likely to enroll compared with students who did not participate. These ratios were extraordinary comparable to the results from the previous analysis, which did not control for student background.

The current results suggest that after accounting for student academic performance, attendance, the school they attended, and their gender, race and ethnicity, and home education level, students who were fully engaged with SSA mentors during the summer of 2018 were more likely to enroll in a postsecondary institution in the fall. Figure 7 also shows that students who engaged late in the summer were 1.2 times more likely to enroll compared with students who did not participate. This ratio was lower than what was found in the initial analyses, with the current results indicated that there was not an appreciable difference in the enrollment of student who engaged late in the summer and students who did not participate after accounting for student level factors¹⁴. Together these results suggest that students who engaged with SSA mentors throughout the entire summer were more likely to resist the summer melt and had higher levels of fall postsecondary enrollment compared with students who did engage with an SSA mentor or only engaged with a mentor for a short period of time.

¹²z=2.46, p=.014

¹³z=3.90, p<.001

¹⁴z=1.53, p=.127

Overall Conclusions

Students who fully engage in services with a SSA agent throughout the summer are more likely to enroll in a postsecondary institution the following fall semester--even when accounting for factors known to be strong predictors such as academic achievement.

The results presented from the updated analysis continue to support the relationship between fall postsecondary outcomes and engagement with a SSA mentor. The updated results, however, suggest that this engagement needs to be throughout the entire summer (i.e., May through August) and not just toward the end of the summer leading into the fall semester (i.e., August) to help reduce summer melt. Fully Engaged students had higher enrollment rates compared to Late Engagement students and students who did not engage with an SSA agent. There was no difference between Late Engagement students and those who did not engage with an SSA agent after accounting for student background factors.

The results suggest that prolonged engagement with an SSA agent was positively related to fall postsecondary enrollment outcomes. These findings are particularly noteworthy due to the fact that this relationship continued to be meaningful after accounting for factors known to be strong predictors postsecondary enrollment (i.e., academic achievement). Indeed, both GPA and attendance rates were strong predictors in the study's prediction model¹⁵. These results were even more notable given that that students with higher both GPAs and daily attendance rates tended to be in the Fully Engaged group. Together these results suggest that engaging with an SSA agent throughout the summer can help reduce summer melt even after considering students' academic performance.

An RCT study could be conducted to further demonstrate the positive impact of SSA engagement on student outcomes..

While the analyses in this updated brief added statistical controls for student characteristics, the results are still correlational in nature and additional analyses are needed before implying causation. The next steps to providing stronger empirical evidence for the positive effects of engagement with SSA and SSA agents would be to plan a study that uses a randomized-control trial (RCT) to randomly assign groups of students to engage or not engage with an SSA agent. This type of RCT study with proper controls would provide the strongest level of empirical evidence for the positive impact that SSA engagement has on student outcomes.

Despite these potential limitations, the results of the updated report in brief provides some encouraging results for SSA engagement and student interactions with SSA agents. The findings that students who consistently engaged with an SSA agent over the course of the entire summer had higher postsecondary fall enrollment rates compared to non-participants and students who only engaged with their SSA mentors before college started in the fall suggest that SSA mentorship could help to reduce college summer melt.

¹⁵ The omnibus likelihood ratio tests for both GPA, $\chi^2(1)=181.17, p<.001$, and attendance rate, $\chi^2(1)=9.84, p<.001$, indicated these two factors were the strongest two predictors of fall postsecondary enrollment in the current study.