Supports Key to the College Preparation of Students From the COVID Cohort

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Introduction

A successful transition from high school to college requires that students have the necessary knowledge, skills, and mindsets in both academic and nonacademic areas (Venezia & Jaeger, 2013). College preparation is a long process. Students complete a series of tasks including taking academic courses, searching for potential colleges, taking standardized tests, choosing a program of study, writing a college application essay, submitting applications to colleges, and applying for financial aid (Oreopoulos & Ford, 2019). High schools and colleges offer a wide range of programs and services to support and guide students in this process. These opportunities aim to increase students' exposure to college and assist with their college applications (Xing et al., 2019). Such supports are likely to increase students' chances of applying to colleges and eventually enrolling.

However, the COVID-19 pandemic caused unexpected changes in students' high school experiences, including their college preparation experiences. When the pandemic hit the United States in the spring of 2020, the class of 2023 were in their freshman year of high school. These students experienced substantial disruptions in their education, such as increased remote learning, canceled extracurricular activities, and limited access to school counselors due to school closures (Anand & Bhatia, 2021). Meanwhile, postsecondary institutions modified their policies in response to the disruptions: They established test-optional admissions policies, moved to hybrid learning, and changed some program offerings (Schultz & Backstrom, 2021; Tilak & Kumar, 2022). All these changes likely affected the college preparation experiences of students in this cohort, and it is therefore important to better understand these college-bound students' experiences. Did college-bound students in this cohort feel prepared for college? What were their college preparation experiences in high school? What were some key elements that helped them prepare for college? Were there any supports they wished they had received? The answers to these questions can provide insights into how to better help these students as they enter college and how to better support students in future cohorts.

To learn how students from the high school class of 2023 prepared for college, we reached out to a random sample of high school seniors in September 2022. As part of a broader survey on the college and career preparation of students from the class of 2023, we asked students to report on their preparedness for college, the college preparation activities in which they participated, the college preparation supports they received, and the supports they wished they had received. In this brief, we share what we learned from 1,485 students who reported that they planned to attend a postsecondary institution the fall after graduating high school (see the appendix for more details about the sample).



Students Reported High Academic, Social, and Personal Preparedness but Relatively Low Financial Preparedness

The surveyed college-bound students rated their college preparedness in four areas: academic, social, personal, and financial preparedness. They were asked how prepared they were to do tasks in these four areas during their first year of college. Overall, most of the high school seniors felt academically prepared (Figure 1). A large majority (86%) reported that they were very or mostly prepared for earning Bs or higher grades in most college courses. A similar percentage (85%) rated themselves very or mostly prepared for keeping up with the work required in college (e.g., studying, attending classes and labs). Eight out of ten students also felt very or mostly prepared for accessing academic resources, such as the library and office hours. Using these three academic preparedness items, we calculated an average score for each student to show their overall academic preparedness.1 On a scale of 0 (not prepared at all) to 4 (very prepared), the weighted



mean of academic preparedness was 3.27. These results indicated that college-bound students from the class of 2023 thought they were clearly ready to accomplish academic tasks in college.

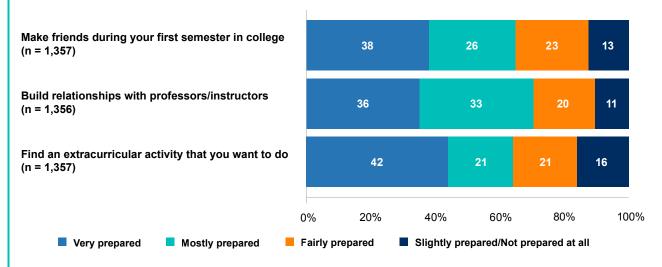
Earn Bs or higher grades in most college courses 48 38 (n = 1,357)Keep up with the work required in college (e.g., 50 35 studying, attending classes and labs) (n = 1,356) Access academic resources (e.g., library, office 48 32 hours) (n = 1,357)100% 40% 80% 20% 60% Very prepared Mostly prepared Fairly prepared Slightly prepared/Not prepared at all

Figure 1. Percentages of Students Reporting Their Academic Preparedness

Social preparedness is also important for success in college. Entering college, students need to know how to socialize in the new college environment, how to develop cultural awareness, and how to negotiate interpersonal challenges (Gray et al., 2013). In this study, a large proportion of the college-bound students felt they were socially prepared for college (Figure 2). Almost two thirds (64%) rated themselves very or mostly prepared for making friends during their first semester in college. Seven out of ten felt very or mostly prepared for building relationships with professors or instructors. In addition, 63% reported that they were very or mostly prepared for finding an extracurricular activity that they wanted to do. In terms of overall social preparedness (indicated by the three items together), the weighted mean¹ of students' social preparedness was 2.87, suggesting that students felt mostly socially prepared for their first year of college.



Figure 2. Percentages of Students Reporting Their Social Preparedness

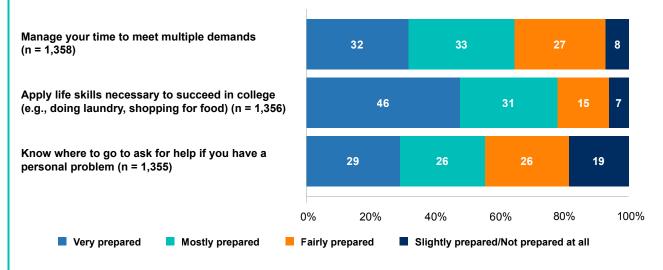


College is a time when students have greater autonomy; often it is the first time they are living independently, away from their families. Being able to manage their daily lives and multiple life demands is a common concern among firstyear college students (Baruch-Runyon et al., 2009). Results from the survey indicated that a majority of college-bound students felt personally prepared (Figure 3). Over three quarters (77%) reported they were very or mostly prepared for applying the life skills necessary to succeed in college, such as doing laundry and shopping for food. About two thirds (65%) felt very or mostly prepared for managing their time in order to meet multiple demands. More than half (55%) considered themselves very or mostly prepared for determining where to go to ask for help if they had a personal problem. Combining the three personal



preparedness items, we found that the weighted mean¹ of students' personal preparedness was 2.87, indicating that students considered themselves mostly prepared to complete personal tasks in the first year of college.

Figure 3. Percentages of Students Reporting Their Personal Preparedness



Compared to academic, social, and personal preparedness, financial preparedness had relatively low ratings (Figure 4). Financial concern, especially about being able to cover college costs and manage college living expenses, is one of the major concerns of college students (Beiter et al., 2015). Among the surveyed college-bound students from the class of 2023, less than half (47%) reported they were very or mostly prepared when it came to being able to pay their tuition. A similar percentage (46%) felt very or mostly prepared when it came to being able to pay their college-related bills for things such as housing and the technology needed for college. Further, only 49% were very or mostly prepared for managing their own finances. It is concerning that only half of the students felt financially prepared and that about one quarter of students (ranging from 21% to 26%) reported they were only slightly prepared or not prepared at all to accomplish these financial tasks in their first year of college. The weighted mean¹ of the overall financial preparedness was 2.33, lower than the scores for the other three aspects of preparedness. These results indicate that a fairly large proportion of students were not very ready financially for college.

Be able to pay your tuition (n = 1,349) 19 28 29 25 Be able to pay your college-related bills (e.g., 26 18 28 28 housing, technology needed for college) (n = 1,353) Manage your finances (n = 1,349) 19 30 21 20% 40% 60% 80% 100% Very prepared Mostly prepared Fairly prepared ■ Slightly prepared/Not prepared at all

Figure 4. Percentages of Students Reporting Their Financial Preparedness





Key Supports Were Related to Self-Reported Preparedness

We further explored factors that could partly explain what influences self-reported preparedness. For each aspect of preparedness, we developed a regression model to investigate the potential factors that could be related to self-reported preparedness.² We found that three factors were important for students' preparedness: college preparation activities, school-based college preparation supports, and college credit-bearing courses.

College Preparation Activities

Students can participate in college preparation activities (college-focused actions, events, programs, and services) to gain greater exposure to college. Participating in college preparation activities has a positive impact on students' college readiness and educational attainment after high school (Xing et al., 2019). The surveyed students were provided with a list of common college preparation activities (Figure 5 shows the entire list). They were asked to indicate whether they had already participated in, planned to participate in, or did not plan to participate in each of the activities. Most students from the class of 2023 actively participated in college preparation activities in high school. On average, each surveyed student engaged in five out of the nine activities. Students used these opportunities to gather information about colleges. Most students (89%) had learned about colleges that interested them by searching college websites, and seven out of ten had visited a college campus either in person or virtually for the purpose of deciding whether they would like to attend. About two thirds (63%) had searched for information about financial aid or scholarship opportunities. Additionally, students also learned about college by talking to knowledgeable people. For example, about three quarters of students (73%) had talked with a teacher, counselor, or college representative about applying to a specific college or colleges, and over half (53%) had talked with these trusted adults about which college major might be a good fit. Almost two thirds (63%) had talked with current students or alumni from colleges that interested them to learn more about different colleges. We conducted a multiple linear regression to explore whether some subgroups of students participated in more activities than others. When we accounted for other variables (e.g., school location, ACT scores, amount of in-person learning during the pandemic), we found no statistical evidence that students' racial/ ethnic group or family income was associated with the total number of college preparation activities they participated in. Overall, students actively engaged in college preparation activities and indicated that they planned to participate in those they had not yet tried.

Figure 5. Percentages of Students Reporting Participating in College Preparation Activities in High School

Learned about colleges that interest you by searching college websites (n = 1,484)

Talked with a teacher, counselor, or college representative about applying to a specific college or colleges (n = 1,476)

Visited a college campus (in-person or virtual) for the purpose of deciding whether you would like to attend (n = 1,478)

Talked with current students or alumni from college(s) that interest you to learn more about colleges (n = 1,476)

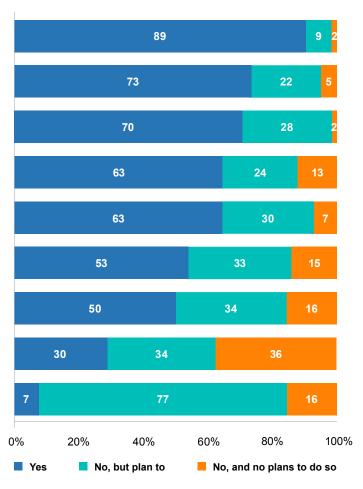
Searched for information about financial aid or scholarship opportunities to attend college (n = 1,477)

Talked with a teacher, counselor, or college representative about which college major might be a good fit for you (n = 1,476)

Attended a college fair (in-person or virtual) to learn more about specific colleges (n = 1,481)

Participated in a college preparation program, workshop, or webinar (n = 1,475)

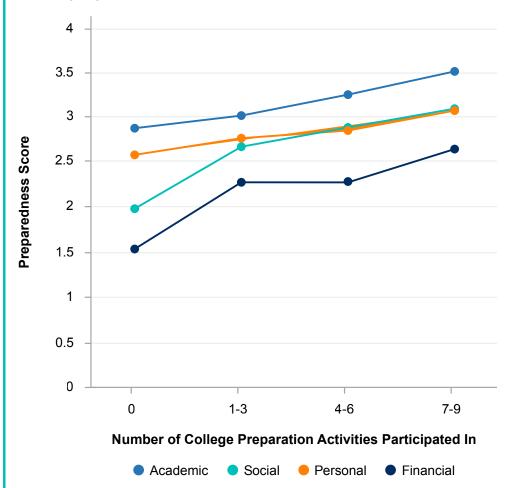
Filed a Free Application for Federal Student Aid (FAFSA) form (n = 1,472)





Participation in college preparation activities is one factor associated with students' self-reported preparedness. As shown in Figure 6, as the total number of college preparation activities increased, the preparedness scores in the four areas increased as well. When we controlled for other variables in the regression models², the number of college preparation activities participated in was still a significant variable that partly explained the variance in preparedness—the more college preparation activities a student engaged in, the higher the self-reported scores were for academic, social, personal, and financial preparedness.

Figure 6. Mean Preparedness Scores by Number of College Preparation Activities Participated in During High School

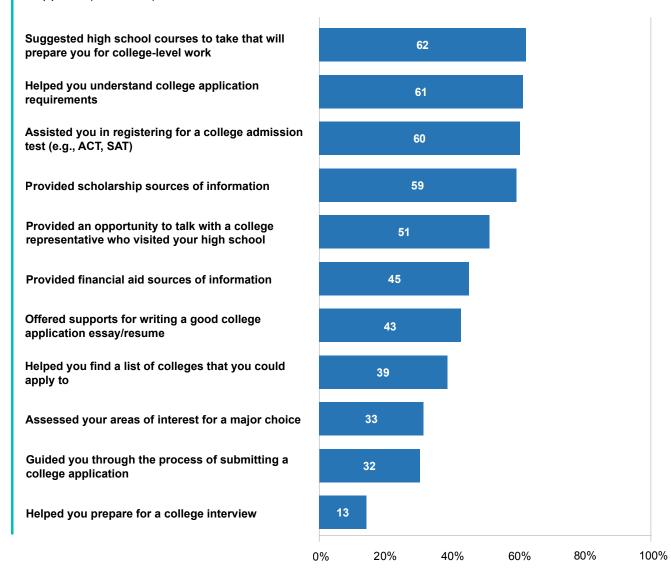


Note. The preparedness scores in the figure are weighted means.

School-Based College Preparation Supports

College preparation supports provided by high schools are essential for helping students become ready for college and the admissions process. Previous research found that students whose high schools had high expectations and provided strong supports for college-going were more likely to have positive college application behaviors (Roderick et al., 2011). In this study, we provided a list of eleven common school-based supports and asked students to select the supports provided by their high schools (Figure 7). On average, students reported that their high schools provided five college preparation supports. Most students (96%) had at least one support from their high schools. The three most common supports were suggesting high school courses to take that would prepare students for college-level work, helping students understand college application requirements, and assisting students in registering for a college admission test (e.g., ACT, SAT). Six out of ten students reported that their schools offered these supports. The three least common supports were assessing students' areas of interest for a major choice, guiding them through the process of submitting a college application, and helping them prepare for a college interview. Less than one third of students selected these as supports provided by their high schools.

Figure 7. Percentages of Students Reporting High School Providing College Preparation Supports (n = 1,421)



We further explored whether college preparation supports depended on school characteristics. First, we examined whether the type of area in which the school was located—urban, suburban, or rural/town—was associated with the supports provided.3 The results showed that schools in urban areas were more likely than schools in rural or town areas to help students understand college application requirements, offer supports for writing a good college application essay or résumé, and guide students through the process of submitting a college application. Urban schools were also more likely to help students find a list of colleges that they could apply to. In contrast, schools in rural or town areas were more likely than those in urban and suburban areas to provide information about scholarships and to assist students in registering for a college admission test.

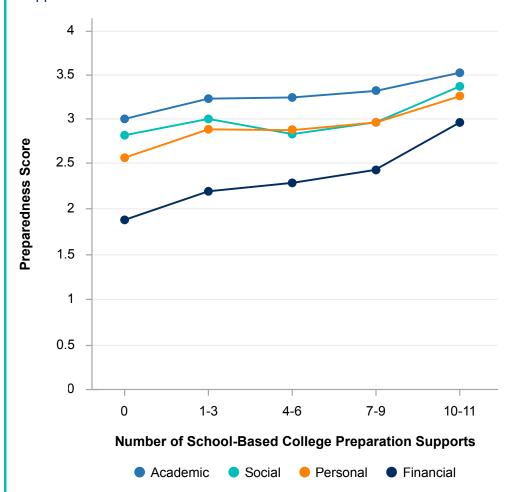


Second, we investigated whether school affluence was associated with the supports that schools provided.⁴ We found that schools with high affluence were more likely than those with low and below average affluence to help students understand college application requirements and guide students through the process of submitting a college application. Highly affluent schools were less likely to assist students in registering for a college admission test, whereas schools with low and below average affluence were less likely to help students understand college application requirements.



School-based college preparation support was related to students' self-reported preparedness. As the total number of school-based college preparation supports increased, the scores in each of the four preparedness areas increased as well (Figure 8). When we held other variables constant in the regression models², the number of school-based college preparation supports provided was still a significant variable predicting preparedness—the more college preparation supports provided by a student's high school, the higher the self-reported scores were in academic, social, personal, and financial preparedness.

Figure 8. Mean Preparedness Scores by Number of School-Based College Preparation Supports



Note. The preparedness scores in the figure are weighted means.

College Credit-Bearing Courses

Taking college credit-bearing courses is beneficial to students' college preparation and associated with positive outcomes, such as persistence in college and on-time degree completion (Struhl & Vargas, 2012). Most surveyed college-bound students from the class of 2023 had taken one or more courses that awarded college credit during high school (i.e., AP, IB, dual/concurrent enrollment, dual credit). Among the respondents, three out of ten (31%) reported that they took more than six credit-bearing courses. More than half of the students took one to six credit-bearing courses (with 29% taking 1–3 courses and 29% taking 4–6 courses). Only one out of ten students (11%) reported that they did not take any credit-bearing courses in high school.

We further explored whether disparities existed in the taking of college credit-bearing courses among students from various backgrounds. First, we investigated the relationship between race/ ethnicity and the number of college credit-bearing courses taken.⁵ We found that the number of courses taken was associated with students' racial/ethnic groups. As shown in Figure 9, 26% of Black students reported that they did not take any college credit-bearing courses, and this percentage was much higher than those for other racial/ethnic groups. More than half of Asian students (56%) took more than six college credit-bearing courses in high school, while only 17% of Black students took more than six such courses. Two thirds (63%) of White students and half (52%) of Latinx students took four or more of these credit-bearing courses.

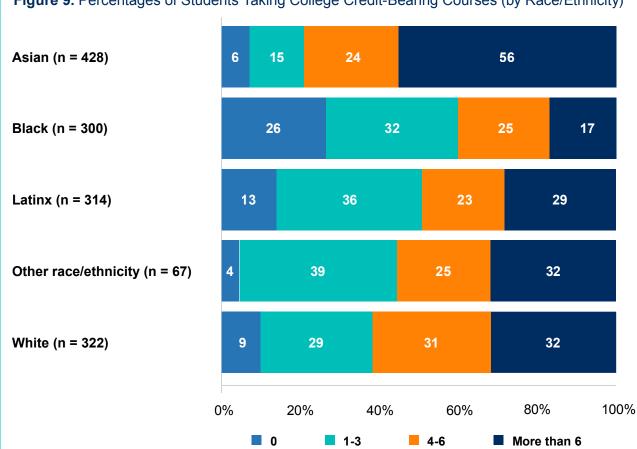
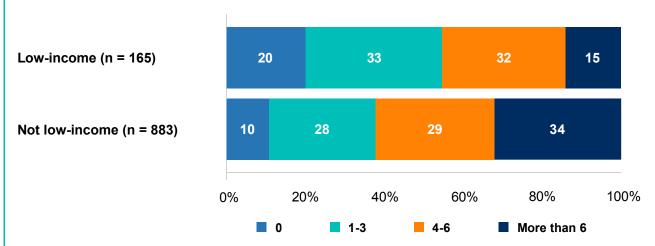


Figure 9. Percentages of Students Taking College Credit-Bearing Courses (by Race/Ethnicity)

Note. Percentages do not add up to 100% due to rounding. The *n*-counts of the groups are unweighted sample sizes, while the percentages in the bars were calculated after weighting. We also investigated whether family income was related to the number of college credit-bearing courses taken.⁶ Students from low-income families were more likely to not take any credit-bearing courses and less likely to take more than six courses, while students who were not from low-income families were more likely to take more than six courses (Figure 10). One out of five students from low-income families reported that they did not take any credit-bearing courses, compared to one out of ten students who were not from low-income families. One third of students who were not from low-income families took more than six credit-bearing courses, while half as many students from low-income families did so.



Figure 10. Percentages of Students Taking College Credit-Bearing Courses (by Family Income)



Note. Percentages do not add up to 100% due to rounding. The *n*-counts of the groups are unweighted sample sizes, while the percentages in the bars were calculated after weighting. Students who did not report their family income were not included in this figure.



Taking college credit-bearing courses was associated with students' self-reported preparedness in all four areas. As shown in Figure 11, the mean scores of preparedness for students who took four or more college credit-bearing courses in high school were higher than those of students who took zero to three credit-bearing courses. After we controlled for other variables in the regression models², taking four or more credit-bearing courses was still a significant variable that partly explained the variance in two areas of preparedness—academic and personal preparedness. Students who took four or more credit-bearing courses had higher self-reported scores in academic and personal preparedness than students who took zero to three credit-bearing courses.

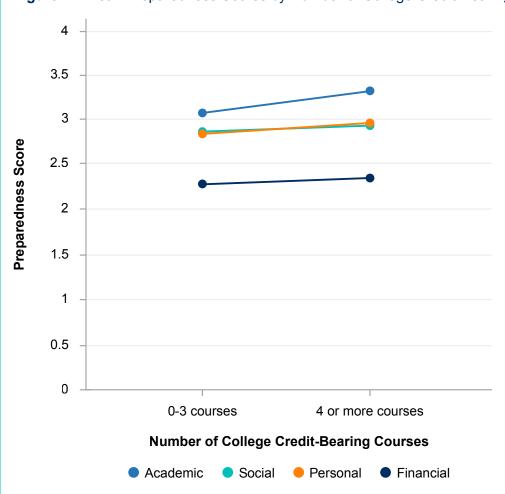


Figure 11. Mean Preparedness Scores by Number of College Credit-Bearing Courses Taken

Note. The preparedness scores in the figure are weighted means.



Students Wanted More College Preparation Supports

To better understand students' college preparation support needs, we asked students in an open-ended question to talk about what other opportunities (if any) they wished they had had or wished their school had provided to better prepare them for college. From the analysis of 491 student responses⁷, we learned that college-bound students from the class of 2023 wanted the following college preparation supports (Table 1).

Table 1. Top College Preparation Support Needs

Top Support Needs (by Rank Order)
Expanded college application information ($n = 177$)
Timely college preparation guidance (n = 128)
Direction on preparing college application materials (<i>n</i> = 101)
Guidance on good-fit college/major/career options (n = 68)
Access to personalized college counseling (n = 44)
More opportunities for college-related interactions ($n = 41$)

Expanded College Application Information

Many students wanted supports related to the college application process. Students wanted someone to walk them through the process and help them understand details such as how to apply for college, when to start applying, how to use the Common App, and how to build a timeline to navigate the application process more easily. Some wished their schools would provide opportunities like programs or seminars to guide them through this process. Two student comments reflect these desires (note that all student quotes are reproduced as written and without editing):

"I wish my school told every student the steps to applying to college with recommended deadlines. If a student didn't go out of their way to attend a college app boot camp like I did, they don't know all the steps to apply. I have to explain so many things to my friends who don't have the information they need."

"I wished that my school that more seminars that detailed the college application because there were too few, so I was left confused. Furthermore, I wished that there was a class dedicated to college applications as no one guided me on my applications." To some students, an important part of the college application process was finding and applying for scholarships and financial aid. These students wanted more information about how and where to search for scholarship opportunities and financial aid information. There were also students who wanted guidance on how to apply. When asked what additional supports they wished to get, two students remarked as follows:

"More help applying for student aid and scholarships."

"Maybe the tips and tricks really behind how to apply to scholarships and applications well and how to do it efficiently."

Timely College Preparation Guidance

Many students wished they had received more college preparation supports before their senior year. Specifically, there were students who would have liked class planning support (such as advice on what classes to take to best prepare for college) much earlier in high school. Some students wished they had been advised to take more advanced or rigorous courses earlier in high school, while others wished they had had access to these advanced classes in their high schools. Students shared these sentiments with us:

"I wish they would have talked to me my junior and sophomore year about planning for college and which credits to take."

"I wish I would have been able to take Dual Enrollment classes from the time I was a freshman until now."

"I wish the school would have promoted dual enrollment and ap earlier on to encourage us to get more college credit in high school and make our classes look more rigorous."

The other support that students wanted before senior year was an opportunity to get an overview of college and learn about college preparation and the college application process. Several students mentioned that a more timely college preparation course would have helped them understand what different colleges would be like before they had to submit college applications. Two students elaborated:

"I wish I would have had college prep classes. What I mean by that is, classes in high school about the whole college experience, expectations etc."

"I wish we would have talked about college before senior year. We are just starting to talk about it and it's almost time to apply but some people don't even have any idea of where they want to go because they didn't know where to look."

Direction on Preparing College Application Materials

College applications involve preparing a range of materials, such as essays, standardized test scores, interviews, and résumés. There were students who wanted additional help preparing these materials. Some wished they had received more help preparing for standardized tests (e.g., ACT, SAT), such as more test preparation classes. Others wanted more direction on preparing their college essays and résumés and preparing for college interviews. Here are some examples that reflect students' wishes:

"I wish my school had given us more college interview preparation. And, I wish the ACT prep class at my school had been better."

"A more in-depth explanation of resumes (the format, etc.) and examples on how to write a PERSONALIZED common app and supplemental essays."

Guidance on Good-Fit College/Major/Career Options

There were students who expressed a need for guidance on how to choose a college, major, or career that would be a good fit for them. First, with so many college options available, some students were not sure which ones to apply to and which ones would be a good choice for them. Students cared about the match between a college and their personal characteristics and wished they had received more support for finding good-fit colleges. The words of two students reflect these wishes:

"I wish my school had placed emphasis on discovering colleges that are tailored towards my personality and academic interests."

"I wish they told me which colleges were best for me that would fit with the degree/major I was going into. I had to research myself and it was difficult to find the school that would be more focused on that specific field."

Second, guidance on major and career choices was also essential for a number of students. They wished their schools had helped them explore potential college majors and future careers and provided advice on how to select a good-fit major or career. A few of them also mentioned that they would have appreciated having pathways for connecting college majors and future careers. Students shared the following remarks:

"Maybe they could have helped some people figure out what their interests are, so they could figure what to major in."

"I wish that my school had more career-focused classes so I could have a better understanding of what I want to pursue in life."

"I wish my school would provide a career path. We are given classes that would allow for a certain college major leading to a preferred career."

Access to Personalized College Counseling

School counselors play a critical role in supporting students' college preparation. Some surveyed students expressed their frustration with school counselor availability. These students wished they had had more time with school counselors who could help them prepare for college more effectively. Some students also wanted more one-on-one opportunities to receive personalized support and discuss their specific questions and circumstances. These two students emphasized this point:

"I really wish there were more one on one session for college counseling, because there are just way too many kids at my school, and few guidance counselors, so it makes it very hard for the students to ask questions regarding the college process."

"I wish counselors were more open to meeting with students one on one and answering questions on the college app process as well as where to apply to."

More Opportunities for College-Related Interactions

There were students who wished they had had more opportunities for college-related interactions in their high schools. They wished their schools had set up opportunities — such as campus visits, field trips, and college fairs — for them to learn about colleges. These sentiments are reflected in three student comments:

"I wish we could have visited colleges as a junior field trip to experience the new things together as a slow transition."

"I wish my school would take the student to tour more colleges and workplaces."

"More colleges to come and explain what their school primary focuses on."

Some students also wanted their schools to connect them with knowledgeable people, such as college representatives, professors, admissions officers, college students, and alumni. This would provide opportunities for students to communicate with these people about the college experience. The words of two students reflect this desire:

"I wish my school would bring or allow more college students to visit our school and tell us more about their college journey."

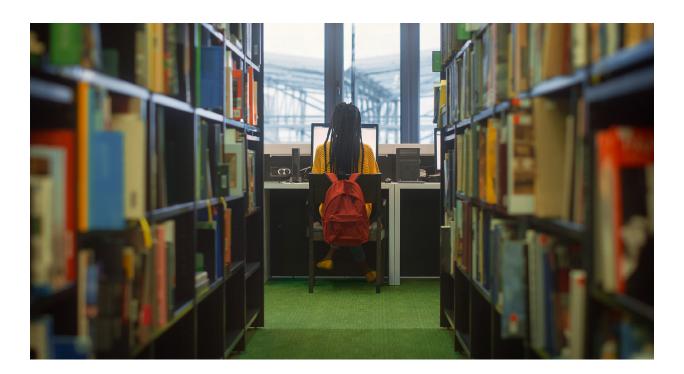
"I wish that college professors would visit the school to give their input on college and how it goes."



Discussion

The high school students in this study reported varying levels of academic, social, personal, and financial preparedness for college. A large majority of students considered themselves quite prepared academically. On average, the results showed that students were equally and mostly prepared socially and personally for the college experiences that await them. The greatest challenge for students was their lack of financial preparedness, highlighted by far more students indicating lower levels of preparedness.

While students considered themselves academically prepared for college, their ACT scores indicated that the students were not as ready as they thought. Interestingly, 86% of students reported that they were prepared to earn grades of B or higher in most college courses, although the percentages of surveyed students who met the ACT College Readiness Benchmarks⁸ (Allen & Radunzel, 2017) were 74% for English, 48% for math, 63% for reading, and 54% for science. Even though most students reported that they were academically prepared for college, their achievement as reflected by the ACT tells a very different story. These students' academic achievement may have been negatively affected by their experiences during the pandemic (including testing formats or modes of testing during school shutdowns), although students still considered themselves academically ready for college. More research is needed to investigate how students evaluate their own academic preparedness. A possible explanation for this difference between self-reported preparedness and measured readiness for success in first-year college coursework could be grade inflation. Recent research shows that the rate of grade inflation has increased during the past decade (Sanchez & Moore, 2022). If students use their high school GPAs as evidence for academic preparedness, it is likely that some students will overestimate their levels of preparedness, especially for college math and science courses.



It is not surprising that a majority of students were no more than fairly prepared financially for college. Even before the pandemic, financial concern was one of the most common concerns among college-bound students, especially for students from low-income families. Due to financial challenges, students may be at risk of not completing their college degrees (Goldrick-Rab et al., 2016). For some students, the pandemic exacerbated financial difficulties, which stemmed from family job loss and the increased cost of living (Bobek & Schnieders, 2023). These financial difficulties are likely to disrupt students' initial financial plans for college and influence their perceptions of their financial preparedness.

Although subgroup differences are not a focus of the current paper, it would be interesting to further explore such differences in students' self-reported preparedness. For example, the regression analyses showed that after we controlled for other variables, Black students were predicted to have lower scores in academic, social, and financial preparedness than their White peers. More research is needed to explain such differences. Also, comparisons based on other subgroup characteristics, such as family income and parental education level, would help us better understand the preparedness of students with various backgrounds.

We identified three support factors that were important for students' preparedness: college preparation activities, school-based college preparation supports, and the taking of college credit-bearing courses.

Overall, students actively participated in college preparation activities. On average, each surveyed student engaged in five out of the nine activities. The lower participation rates for some activities might be due to the timing of the survey. For example, although only 7% of the surveyed students reported that they had filed a FAFSA at the time of the survey, another 77% planned to do so. Because the survey opened in early September and closed mid-October, it is likely that most students had not started the FAFSA yet. As students engaged in more college preparation activities, there was a corresponding increase in self-reported academic, social, personal, and financial preparedness.

There was a similar finding for school-based supports, such as suggestions about which courses students should take to prepare for college, help with understanding college application requirements, and information about scholarships. The more college preparation supports provided by a student's high school, the higher the level of preparedness reported by students. There were differences in available supports based on school location and affluence. Previous research has shown inequities in access to school-based college preparation resources (e.g., school counselors who provide college information) among schools with different affluence levels (Bryan et al., 2009). However, this study found no evidence that schools with specific characteristics provided more college preparation supports than others; the supports provided were simply different.

For the factor related to college credit-bearing courses, the results showed that students taking four or more credit-bearing courses considered themselves more academically and personally prepared than students taking three or fewer of these types of courses. Completion of creditbearing courses has been shown in previous research to be a strong predictor of college enrollment and preparation (Schneider & Saw, 2016). In this study, we found that disparities existed among students from various racial/ ethnic and family income backgrounds. Black students take fewer credit-bearing courses than students from other racial/ethnic groups, and Asian students take the most. This finding is consistent with the findings of previous research (e.g., Ricciardi & Winsler, 2021; Young et al., 2013). Future research would be necessary to investigate why such disparities exist; they may arise from a combination of factors (e.g., availability of courses, lack of teacher or parental encouragement to take



credit-bearing courses). Students from the low-income group were also less likely to take any credit-bearing courses, while students who were not from the low-income group were more likely to take more than six courses. As with the racial/ethnic group differences, it was unclear in this study why there was such a difference between students from different family income groups. Possible reasons could be a lack of access to physical resources, a lack of access to opportunities, and lower academic achievement compared to students not from the low-income group (Ricciardi & Winsler, 2021).

In their own words, students told us they wanted more college preparation supports. They wanted more information to assist them with college applications and more direction on how to prepare the application materials. Students also wished they had been provided with school-based college preparation supports early enough in high school to make a difference, rather than in their senior year when it was too late for them to make certain adjustments, such as adjustments to college preparatory coursework. Further, students wanted more guidance on selecting college, major, and career options that would be good fits for them, as good-fit options are critical for later success. Students even highlighted the need for personalized college counseling and more college-related interactions while in high school.

College preparation supports are essential for helping students consider themselves academically, socially, personally, and financially prepared for college. This study revealed gaps in the supports being provided to students and offered insights into different ways to better help college-bound students prepare for the transition from high school to college.



Recommendations

We want to thank the American School Counselor Association (ASCA) and ACT's American College Application Campaign (ACAC) for providing the following recommendations based on the findings of this research study.

American School Counselor Association Recommendations

ASCA is an influential organization that guides and supports school counselors' efforts to help students achieve academic success, college and career readiness, and social and emotional development. ASCA also focuses on closing achievement and opportunity gaps so students can succeed in K–12 schools and prepare for postsecondary success. With an important lens into what works in schools, ASCA is able to offer recommendations that schools, school counselors, and teachers can implement to support students' college preparation.

- Provide timely college preparation guidance as part of regular course planning throughout
 a student's high school career. Provide access to personalized college counseling
 and advising. Create opportunities for greater collaboration among school counselors,
 teachers, school staff, and families to offer more personal and individualized feedback and
 information to students. Create collaborative opportunities for parents to share their various
 postsecondary experiences with students.
- Create a comprehensive postsecondary planning program that includes guidance on goodfit college, major, and career options. Place more emphasis on postsecondary planning that
 is part of career exploration and planning, even beginning in middle school, so that students
 can see both the big picture and the steps they need to take (including taking the correct
 high school courses for college readiness) to meet their career goals.
- Build in discussions about good-fit choices during typical activities occurring throughout the school year (e.g., family-teacher conferences, career fairs). These efforts can help students become more familiar with the "fit" concept and the importance of fit, as well as help them begin to incorporate it into their decision-making. For example, encourage students to use their interests and academic preferences when selecting courses.
- Expand and vary the delivery of college preparation supports. Provide resources in different
 formats (e.g., videos, Q & A one-pagers, near-peer connections with recent graduates
 attending college) to afford students more opportunities to obtain college application and
 related information that resonates with them. Identify students who may need additional
 support—for example, first-generation college goers and those from families in lower
 socioeconomic brackets—to ensure an understanding of processes and procedures.
- Incorporate peer-to-peer mentoring opportunities to give seniors the chance to share their
 college and career planning experiences with younger students. This increases perspective
 and offers an experience-based platform to help students plan well. This dialogue can
 happen in classrooms; for example, a senior English class visits a freshman or sophomore
 English class to discuss how they navigated college exploration and where they are now.

American College Application Campaign Recommendations

ACAC, a program of ACT's Center for Equity in Learning, is a national initiative to expand postsecondary opportunities for first-generation college students and students from low-income families. ACAC emphasizes the importance of college and the supports students need when navigating the college application and admission process. Therefore, ACAC is particularly well-suited to recommend the following college preparation supports.

- Leverage postsecondary planning tools. Students are asking for more guidance on goodfit college/major/career options. There are many free or subscription-based resources
 available today that help students identify colleges, majors, and careers that match them
 best. All school districts should have access to at least one tool that every student can use
 as early as ninth grade. School counseling staff should use these tools with their students
 as they work together year after year to develop a student's goals for life after high school.
- Build an initial college list. Schools should create opportunities during the school day for all juniors to develop preliminary lists of colleges where they may want to apply. In the process of generating the lists of colleges, help students understand the importance of match and fit in their college choices. Ensure that there are multiple opportunities for all juniors to participate and that teachers help juniors schedule times that work for them. Schedule college list-building activities in the spring so that juniors head into summer break with their initial lists.
- Help prepare the college application. Once high school seniors know where they want to apply, knowledgeable high school staff and volunteers need to help break down the components of the college application. Every senior should have a college application checklist; for each college they want to apply to, they should determine whether an application fee is required, whether they qualify for a fee waiver, whether an essay or letter of recommendation is required, and what personal information they should gather. Students should be able to walk through a practice application with school counselors, teachers, or other supportive and trusted adults. Offer college essay-writing workshops to ensure students write their essays and personal statements well before they plan to submit their applications.
- Provide college application completion support. To assist students who need more support related to the college application process, schools should provide time and space during the school day for all seniors to complete and submit their college applications. Schedule college application activities in the fall of senior year during the school day. Offering these activities during the school day will help ensure that students can complete these activities with a supportive and trusted adult, whether these are students who may be the first in their families to attend college, students without reliable internet access at home, or students facing other barriers that might prevent them from returning for an evening or weekend activity. School-based events also ensure that students submit application payments or fee waivers, transcripts, and letters of recommendation in a timely manner.

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Notes

- 1. The responses were converted to scores (very prepared = 4, mostly prepared = 3, fairly prepared = 2, slightly prepared = 1, not prepared at all = 0). The average of the three items was calculated as a student's overall preparedness score. A weighted mean of the whole sample was then calculated using the average scores.
- 2. For each aspect of preparedness (academic, social, personal, financial), a multiple linear regression was conducted with the average preparedness score as the dependent variable and the total number of college preparation activities participated in, the total number of college preparation supports the high school provided, and the total number of credit-bearing courses taken as independent variables. The model also included the following control variables: race/ethnicity, family income, parental education level, ACT Composite score, the amount of in-person learning during high school, the total number of academic supports provided by the high school during the pandemic, and the total number of challenges experienced in high school due to the pandemic. The adjusted R² of the four models were as follows: academic = 0.122, social = 0.071, personal = 0.098, and financial = 0.103. The reported factors explained a significant proportion of variance in the dependent variables at a .05 alpha level. See the appendix for relevant survey questions and regression statistics.
- 3. A non-parametric test (chi-square test of independence) was conducted for each of the eleven college preparation supports to see whether school location (three levels: rural/town, suburban, urban) was related to whether each support was provided (two levels: yes, no). The reported results were significant at the adjusted alpha level of .008.
- 4. A non-parametric test (chi-square test of independence) was conducted for each of the eleven college preparation supports to see whether school affluence was related to whether each support was provided (two levels: yes, no). The school affluence indicator used a proprietary algorithm developed to rank the socioeconomic status of an institution. Data points ranging from specific variables to census data were incorporated into the formula. There were five levels of affluence: low, below average, average, above average, and high. The reported results were significant at the adjusted alpha level of .005.
- 5. A non-parametric test (chi-square test of independence) was conducted to see whether racial/ ethnic group (five groups: Black, Latinx, White, Asian, Other) was associated with the number of college credit-bearing courses taken (four categories: 0, 1–3, 4–6, more than 6). The "Other" racial/ethnic group included Native American, Native Hawaiian/Other Pacific Islander, and two or more races/ethnicities. Due to low *n*-counts, these groups were combined into "Other." The reported results were significant at the adjusted alpha level of .002.
- 6. A non-parametric test (chi-square test of independence) was conducted to see whether family income (three groups: low income, not low income, income missing) was associated with the number of college credit-bearing courses taken (four categories: 0, 1–3, 4–6, more than 6). The reported results were significant at the adjusted alpha level of .004.

- 7. Thematic qualitative analysis procedures were conducted to analyze students' responses to the open-ended question. All responses were read, segmented by relevance (some comments were excluded because of a lack of relevance), and coded by a qualitative research expert to construct tentative categories. These categories were then reviewed and verified by a second qualitative research expert.
- 8. The ACT College Readiness Benchmarks are the minimum ACT test scores required for students to have a high probability of success in first-year college courses. Students who meet a Benchmark on the ACT have approximately a 50% chance of earning a B or higher in the corresponding college courses. The ACT Benchmarks for English, math, reading, and science are 18, 22, 22, and 23, respectively.





Technical Appendix

Sample

This study was part of a larger survey research project. The survey focused on the college and career preparation of students from the class of 2023, who were in the first year of high school when the pandemic hit the United States. This report summarized the findings about college-bound students' self-reported college preparedness, their college preparation activities in high school, and the supports they received.

The target population was U.S. high school students who either 1) registered for the September 2022 ACT and were in Grade 12 at the time, 2) took the ACT in October 2021, December 2021, February 2022, or April 2022 and were in Grade 11 at the time, or 3) registered for the June or July 2022 ACT and were in Grade 11 at the time. The sampling frame (n = 339,691) excluded students who opted out of ACT communications.

A total of 53,024 students were randomly selected from the sampling frame and invited to participate in an online survey. The survey opened on September 10, 2022, and closed on October 12, 2022. A total of 2,145 self-reported high school seniors answered at least one survey question. Among them, 1,549 students answered at least half of the required questions; this group was used as the analytical sample of the survey (a response rate of 3%). In this issue brief, we focused on the 1,485 students who reported that they planned to attend a postsecondary institution (a four-year public or private college or university, a two-year college, or a career/technical school) the fall after graduating high school.

The unweighted analytical sample of college-bound students (n = 1,485) was 69% female and 29% male; 2% selected "other gender" or did not report their gender. Additionally, they were 20% Black, 21% Latinx, 22% White, 29% Asian, 5% other races/ethnicities (including Native American, Native Hawaiian/Other Pacific Islander, and two or more races/ethnicities); 4% did not report their race/ethnicity. In terms of family income, 11% of the respondents reported that they came from low-income families (families whose annual income was less than \$36,000), and 29% did not report their annual family income. In terms of parental education level, 12% of the respondents reported that neither parent/guardian had any college experience; 13% reported that their parents/guardians had some college experience but that neither had earned a bachelor's degree from a four-year institution; 66% reported that at least one parent/guardian had earned a bachelor's degree from a four-year institution; and 9% did not report the education level of their parent(s)/guardian(s).

We used propensity weighting to complete the analyses of the survey to compensate for the differences in sample size and the overrepresentation of respondents from subgroups. The sample was a stratified random sample, with overrepresentation of Asian, Black, and Latinx students. We also conducted multiple imputation to approach the issue of missing data in calculating weights. The imputed data were not used in other analyses.

Survey Instrument

The following are the relevant survey items:

- 1. Since the beginning of the COVID pandemic, did you learn online, in person (at school), or a mix of the two? Please mark the appropriate option for each year. (Exclusively online, mostly online, about the same online and in person, mostly in person, exclusively in person)
 - Freshman—Grade 9 (Spring 2020)
 - Sophomore—Grade 10 (Fall 2020–Spring 2021)
 - Junior—Grade 11 (Fall 2021–Spring 2022)
 - Senior—Grade 12 (Fall 2022)
- 2. During high school, how many course(s) did you take that award college credit (i.e., AP, IB, dual/concurrent enrollment, dual credit)? (0, 1-3, 4-6, more than 6)

3. Which of the following academic support(s) did your school provide after the pandemic

assignments (e.g., office hours, tutoring) Regular one-on-one check-ins with a teacher or other educator about academics An educator who reached out to you to provide academic support or resources Help when there were technology issues (e.g., computer hardware or software, co Information to help with navigating technology needed for school Availability of additional resources (e.g., recorded lectures, hard copy materials) Other (please specify) None of the above		started? (Select all that apply)
 (select all that apply) Difficulties in meeting basic needs (e.g., food) Lack of motivation to learn Difficulties with a device (e.g., computer, tablet) during online learning Lack of access to stable internet during online learning Missed opportunities to participate in extra-curricular activities Unable to have in-person relationships with classmates and teachers Lack of access to school resources (e.g., school counselors) Financial stress Inability to adapt to life changes Mental health issues Other (please specify) 		 □ Flexible deadlines for completing school assignments □ Timely response to questions you asked outside of school hours □ Additional time made available outside of school hours to talk with someone about class assignments (e.g., office hours, tutoring) □ Regular one-on-one check-ins with a teacher or other educator about academics □ An educator who reached out to you to provide academic support or resources □ Help when there were technology issues (e.g., computer hardware or software, connectivity) □ Information to help with navigating technology needed for school □ Availability of additional resources (e.g., recorded lectures, hard copy materials) □ Other (please specify)
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- 5. Have you done each of the following college preparation activities? (Yes; No, but plan to; No, and no plans to do so)
 - Learned about colleges that interest you by searching college websites
 - Attended a college fair (in-person or virtual) to learn more about specific colleges

- Visited a college campus (in-person or virtual) for the purpose of deciding whether you would like to attend
- Participated in a college preparation program, workshop, or webinar
- Talked with a teacher, counselor, or college representative about applying to a specific college or colleges
- Talked with current students or alumni from college(s) that interest you to learn more about colleges
- Talked with a teacher, counselor, or college representative about which college major might be a good fit for you
- Searched information about financial aid or scholarship opportunities to attend college
- Filed a Free Application for Federal Student Aid (FAFSA)

What college preparation support(s) did your high school provide? (Select all that apply)
☐ Helped you understand college application requirements
☐ Suggested high school courses to take that will prepare you for college-level work
☐ Helped you find a list of colleges that you could apply to
☐ Assessed your areas of interest for a major choice
☐ Provided financial aid sources of information
☐ Provided scholarship sources of information
☐ Offered supports for writing a good college application essay/resume
☐ Helped you prepare for a college interview
☐ Assisted you in registering for a college admission test (e.g., ACT, SAT)
$\hfill\square$ Provided an opportunity to talk with a college representative who visited your high school
☐ Guided you through the process of submitting a college application
☐ Other (please specify)
□ None of above

- 7. What, if any, other opportunities do you wish you would have had or your school would have provided to better prepare you for college?
- 8. How prepared are you to do the following things in your first year of college? (Very prepared, mostly prepared, fairly prepared, slightly prepared, not prepared at all)
 - Earn B or higher grades in most college courses
 - Keep up with the work (e.g., studying, attending classes, labs) required in college
 - Access academic resources (e.g., library, office hour)
 - Make friends during your first semester in college
 - Build relationships with professors/instructors
 - Find an extracurricular activity that you want to do
 - Manage your time to meet multiple demands
 - Apply life skills necessary to succeed in college (e.g., doing laundry, shopping for food)
 - Know where to go to ask for help if you have a personal problem
 - Be able to pay your tuition
 - Be able to pay your college-related bills (e.g., housing, technology needed for college)
 - Manage your finances

The items in the preparedness question were developed based on a previous study focusing on college-bound students' concerns about college (Bobek et al., 2021).

Multiple Linear Regression Statistics

Table A1. Regression Statistics (Weighted) of the Academic Preparedness Model

Regression Variables	Estimate	Standard error	t	р
(Intercept)	3.17	0.17	18.11	<0.01
Black	-0.25	0.08	-3.25	<0.01
Latinx	-0.09	0.07	-1.37	0.17
Asian	-0.10	0.08	-1.22	0.22
Other race/ethnicity	-0.10	0.09	-1.12	0.26
Low income	0.19	0.08	2.34	0.02
Income unknown	0.16	0.05	3.24	<0.01
Parental education: no college	-0.09	0.08	-1.09	0.28
ACT Composite score	0.02	0.00	4.09	<0.01
Amount of in-person learning	-0.18	0.04	-4.96	<0.01
Academic supports during the pandemic	0.01	0.01	1.09	0.27
Challenges experienced during the pandemic	-0.03	0.01	-3.25	<0.01
College-credit courses: 4 or more	0.11	0.05	2.22	0.03
College preparation activities participated in	0.06	0.01	4.88	<0.01
College preparation supports in high school	0.03	0.01	3.12	<0.01

 Table A2. Regression Statistics (Weighted) of the Social Preparedness Model

Regression Variables	Estimate	Standard error	t	р
(Intercept)	2.65	0.24	10.96	<0.01
Black	-0.40	0.11	-3.76	<0.01
Latinx	-0.09	0.09	-0.97	0.33
Asian	-0.16	0.12	-1.40	0.16
Other race/ethnicity	-0.24	0.13	-1.87	0.06
Low income	0.32	0.12	2.75	0.01
Income unknown	0.10	0.07	1.49	0.14
Parental education: no college	-0.12	0.11	-1.12	0.26
ACT Composite score	0.01	0.01	2.14	0.03
Amount of in-person learning	-0.14	0.05	-2.71	0.01
Academic supports during the pandemic	0.01	0.01	0.52	0.61
Challenges experienced during the pandemic	-0.03	0.01	-2.39	0.02
College-credit courses: 4 or more	-0.03	0.07	-0.51	0.61
College preparation activities participated in	0.09	0.02	5.75	<0.01
College preparation supports in high school	0.03	0.01	2.60	0.01

Table A3. Regression Statistics (Weighted) of the Personal Preparedness Model

Regression Variables	Estimate	Standard error	t	р
(Intercept)	3.18	0.21	15.01	<0.01
Black	-0.15	0.09	-1.62	0.10
Latinx	-0.09	0.08	-1.09	0.28
Asian	-0.27	0.10	-2.58	0.01
Other race/ethnicity	-0.02	0.11	-0.19	0.85
Low income	0.33	0.10	3.25	<0.01
Income unknown	0.03	0.06	0.47	0.64
Parental education: no college	-0.02	0.10	-0.23	0.82
ACT Composite score	0.01	0.01	0.95	0.34
Amount of in-person learning	-0.19	0.04	-4.37	<0.01
Academic supports during the pandemic	-0.01	0.01	-1.06	0.29
Challenges experienced during the pandemic	-0.08	0.01	-6.61	<0.01
College-credit courses: 4 or more	0.14	0.06	2.48	0.01
College preparation activities participated in	0.07	0.01	5.18	<0.01
College preparation supports in high school	0.04	0.01	4.14	<0.01

Table A4. Regression Statistics (Weighted) of the Financial Preparedness Model

Regression Variables	Estimate	Standard error	t	p
(Intercept)	2.35	0.26	8.91	<0.01
Black	-0.47	0.12	-4.05	<0.01
Latinx	-0.29	0.10	-2.83	<0.01
Asian	-0.21	0.13	-1.63	0.10
Other race/ethnicity	-0.37	0.14	-2.67	0.01
Low income	0.00	0.13	0.03	0.98
Income unknown	-0.03	0.08	-0.46	0.65
Parental education: no college	-0.10	0.12	-0.82	0.41
ACT Composite score	0.01	0.01	1.03	0.30
Amount of in-person learning	-0.02	0.06	-0.34	0.74
Academic supports during the pandemic	-0.01	0.02	-0.33	0.74
Challenges experienced during the pandemic	-0.12	0.01	-8.39	<0.01
College-credit courses: 4 or more	0.01	0.07	0.10	0.92
College preparation activities participated in	0.05	0.02	2.67	0.01
College preparation supports in high school	0.06	0.01	4.50	<0.01



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