

Advanced Placement (AP) Enrollment, Participation, and Exam Performance

May 22, 2023



Key Points

- Many factors related to AP course enrollment and AP exam taking have changed over the past 3 years in Newton
 - Work to increase access to NPS AP courses has been a focus in recent years
 - Enrollment in NPS AP courses has increased starting in 2021-2022 for all students, specifically in 12th grade
 - AP exam participation has decreased among 12th graders, beginning in 2019-2020
 - The population of exam takers in Newton has changed beginning in 2019-2020
 - AP exam performance has shifted from a relatively stable pattern beginning 2019-2020, with an increased percentage of students scoring 1-2 on AP exams
 - The high school schedule shift, requiring revised course pacing and activity design, and COVID have also likely impacted exam scores in recent years

Advanced Placement overview

- Newton offers AP courses and administers College Board sponsored AP exams
- AP course curriculum and AP exam content managed by the College Board
- Courses taught by Newton Public Schools staff follow required AP curriculum
 - Number of AP courses taught by NPS has increased in recent years (addition of Environmental Science and 3-D Design courses)
- Students in NPS AP courses have the option to take the College Board exam at the end of the year
 - This exam is separate from the course assessments and course grades from the NPS teachers that are listed on the students' transcript
- Some colleges and universities provide college credit and/or placement based on student AP exam scores

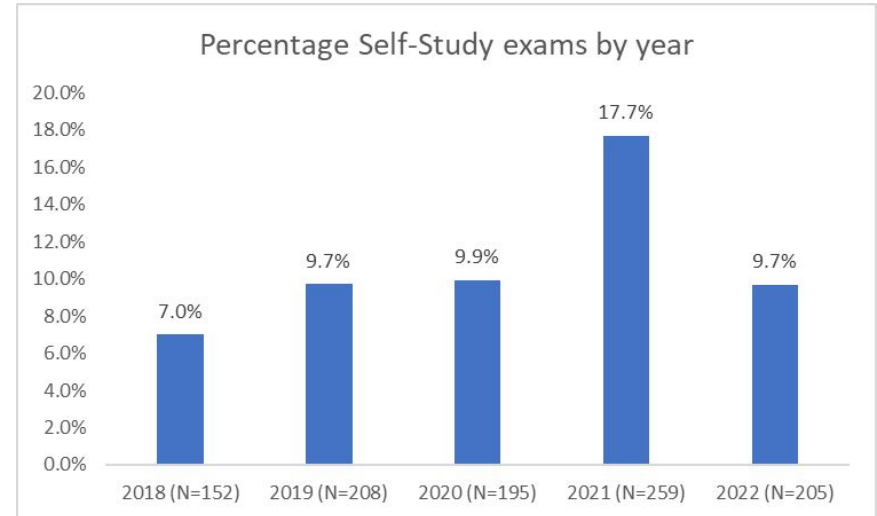
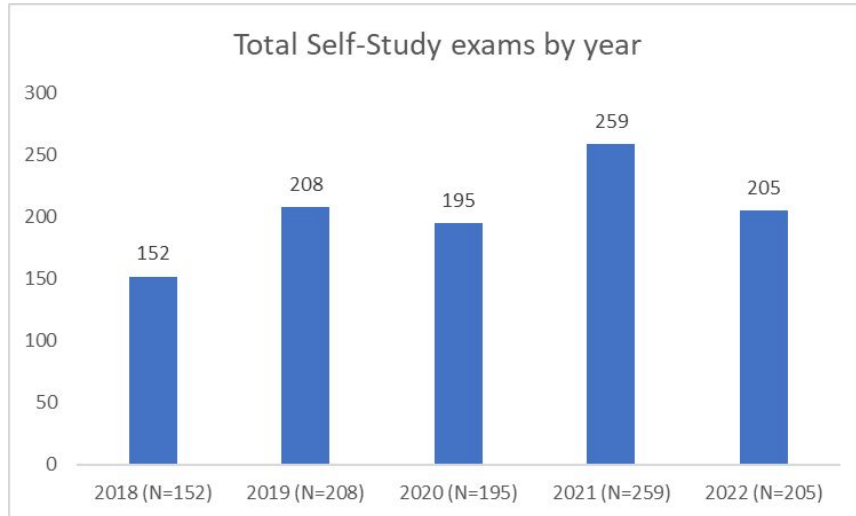
AP Score	Recommendation	College Course Grade Equivalent
5	Extremely well qualified	A+ or A
4	Very well qualified	A-, B+, or B
3	Qualified	B-, C+, or C
2	Possibly qualified	----
1	No recommendation	----

Data Sources

- DESE online data displays data for AP exam takers
 - Does not show students enrolled in AP classes who do not take exam
 - Includes self-study students (not enrolled in AP course in NPS) who take the exam independently
- NPS data allows for analysis of enrollment, exam participation, and course grades for students enrolled in NPS AP courses
- Score distribution graphs in this NPS report display DESE data, which includes all Newton exam takers
- Enrollment rates, AP exam participation, and course grades in report utilize NPS data

Self-Study students

- Relatively consistent percentage of AP exam takers in Newton, except for 2021
- Change in 2021 due to a decrease in total exams taken and small increase in self-study exams taken
 - Likely related to COVID during the 2020-2021 school year



Access to/Enrollment in AP in NPS

- District focus on expanding access to AP courses over the past 10 years
 - Based on data indicating disproportionate enrollment of specific student groups in Newton AP courses
- Beginning in 2019-2020, NPS has worked to reduce unnecessary prerequisites for many AP courses
 - Prerequisites that were determined to not be necessary to access content in specific courses included supplemental placement tests, summer participation requirements, grade minimums, and other requirements for students to complete prior to enrollment
 - Most courses retain course prerequisites that are necessary to successfully engage in the course
- Changes designed to address data indicating that prerequisites can perpetuate disproportionate enrollment¹
- Shifts supported by research indicating that participation in an AP course and exam, regardless of exam score, results in significantly stronger college outcomes for students compared to students who do not participate in AP courses²

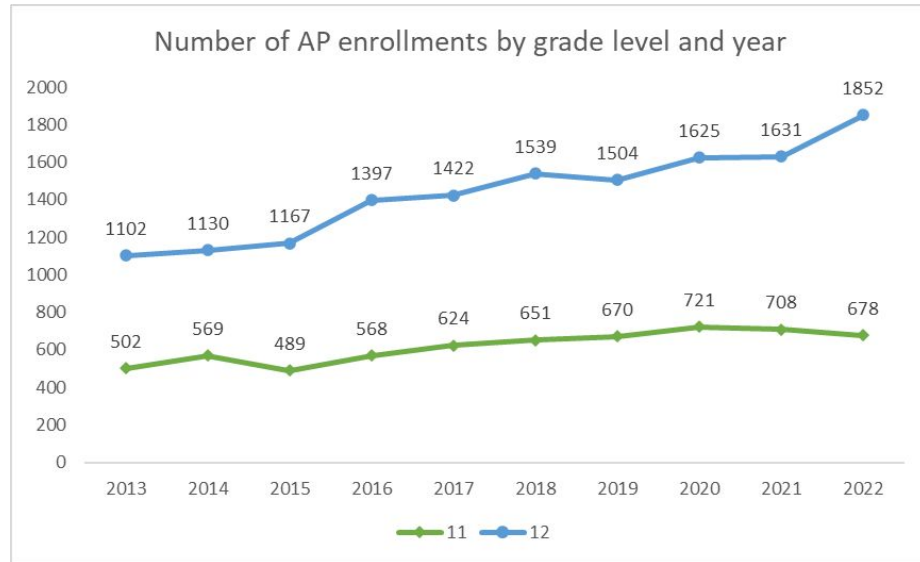
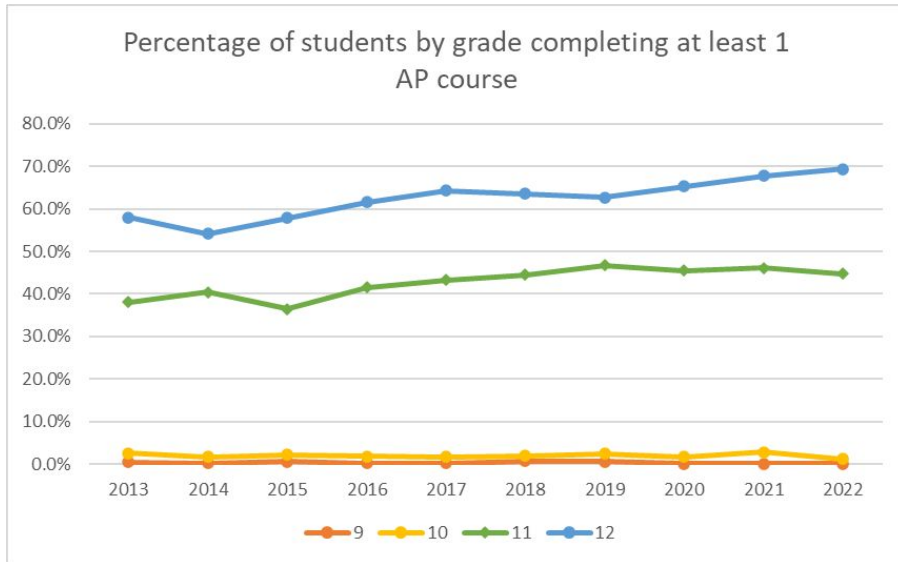
¹<https://edtrust.org/resource/inequities-in-advanced-coursework/?emci=ed0b9936-4232-ea11-a1cc-2818784d084f&emdi=ea000000-0000-0000-0000-000000000001&ceid=%7B%7BC0ntactsEmailID%7D%7D>

²<https://apcentral.collegeboard.org/media/pdf/new-analyses-ap-scores-1-and-2.pdf>



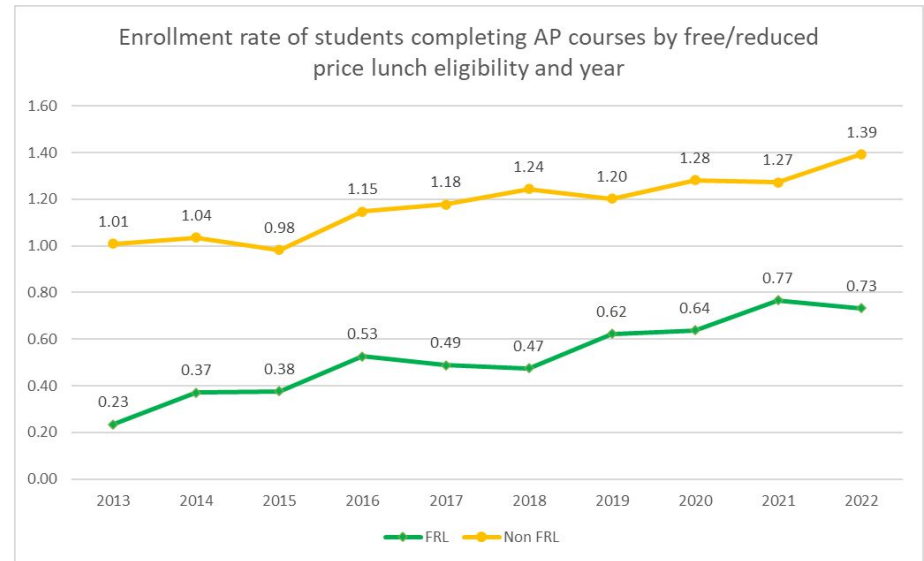
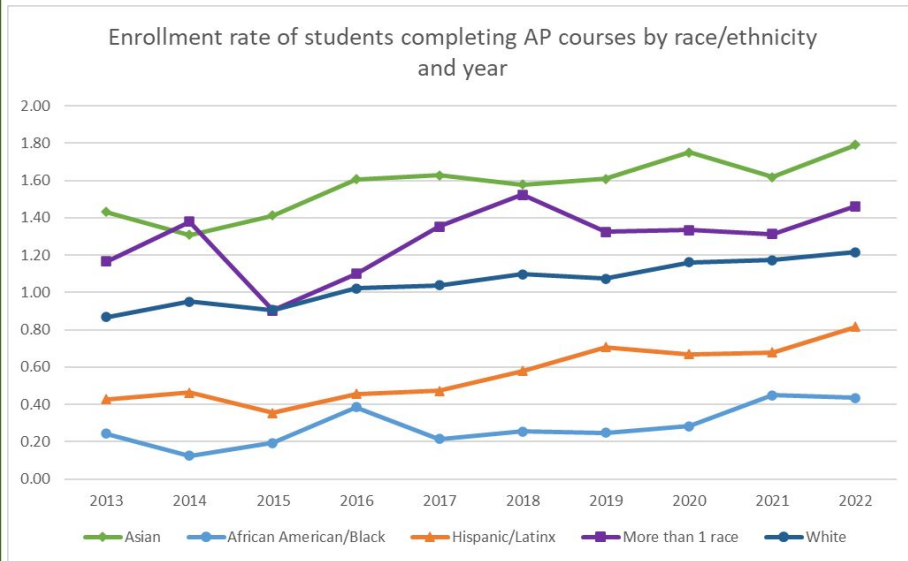
AP enrollment by grade

- Increase in enrollment in grade 12 in 2019-2020 and 2020-2021 due to increase in AP course offerings; increase in grade 12 in 2021-2022 due to expanded access
- Completion of AP courses in grades 9, 10 and 11 has remained relatively constant



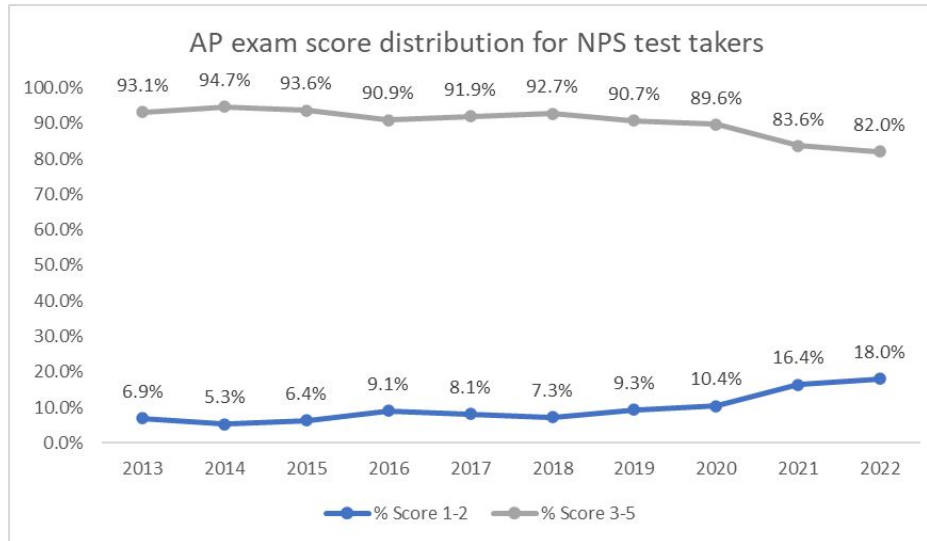
AP enrollment by demographics

- Increase in enrollment rate for all racial/ethnic subgroups and students eligible for free/reduced price lunch in Newton, although enrollment gaps persist



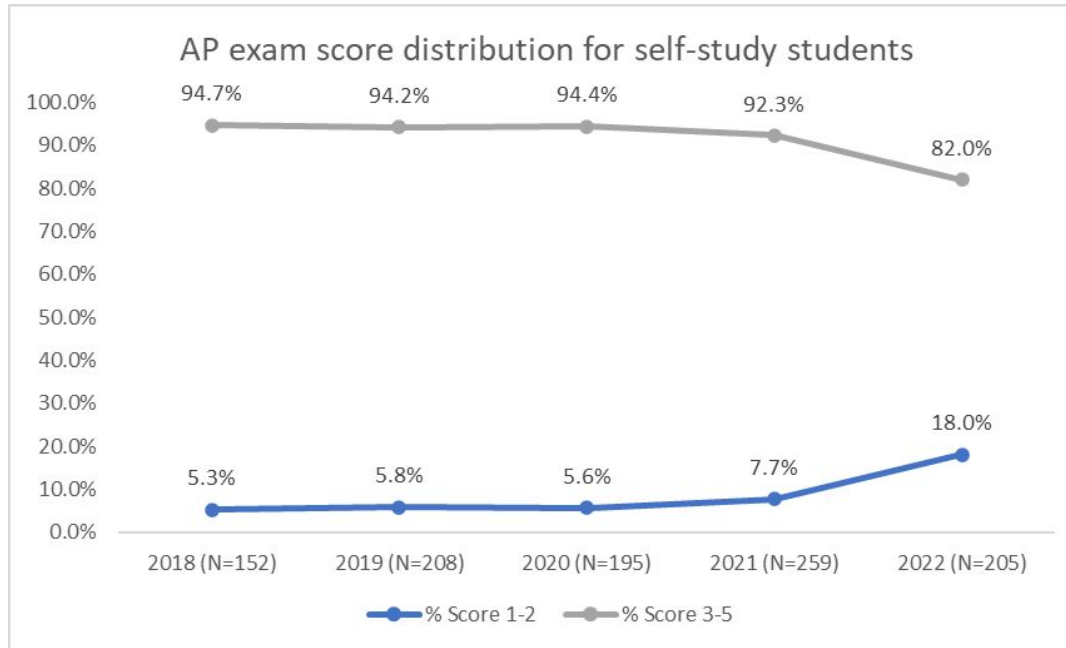
AP exam performance

- AP exams are scored 1-5 (College Board recommendation for receiving college credit and placement); scores of 3-5 result in a “qualified recommendation”, score of 2 results in a “possibly qualified recommendation”, 1 results in “no recommendation”
- Beginning in 2019-2020, pattern of AP scores shifts, with an increased percentage of students scoring a 1 or a 2



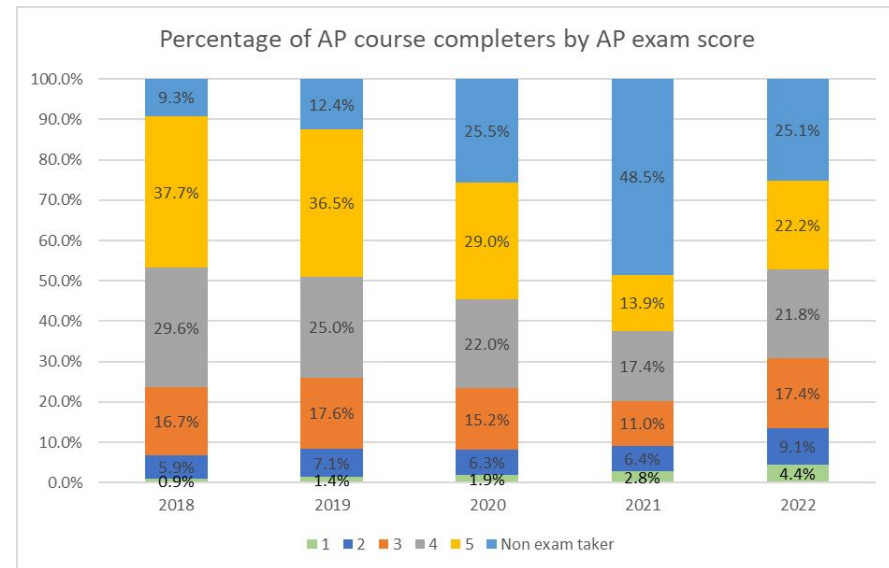
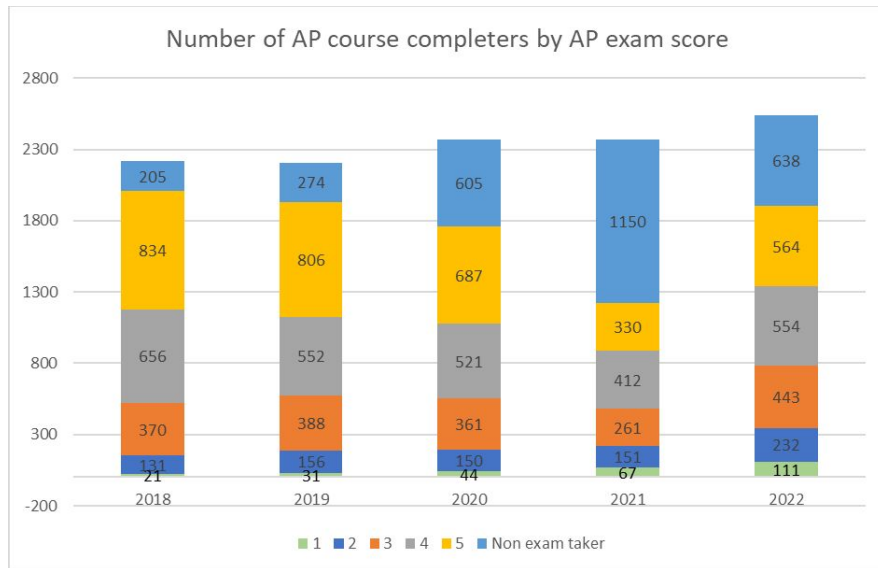
Self-study exam performance

- Self-study students saw a similar shift in exam performance in 2022, while the percentage of self-study students taking the exam in 2022 returned to typical levels



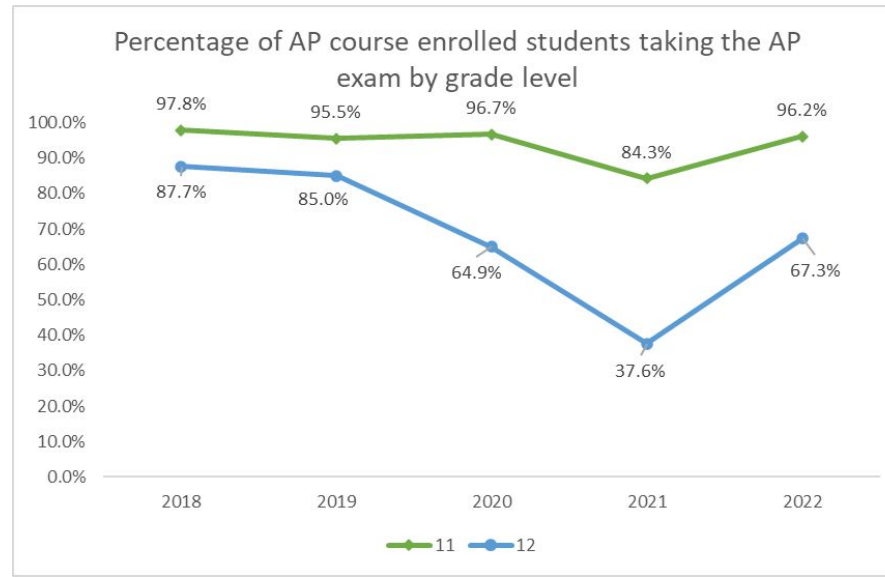
Newton course completers by AP exam score

- The total number of course completers has increased, as has the number of non exam takers; percentage of non exam takers has increased in the past 3 years



Shifts in AP exam participation

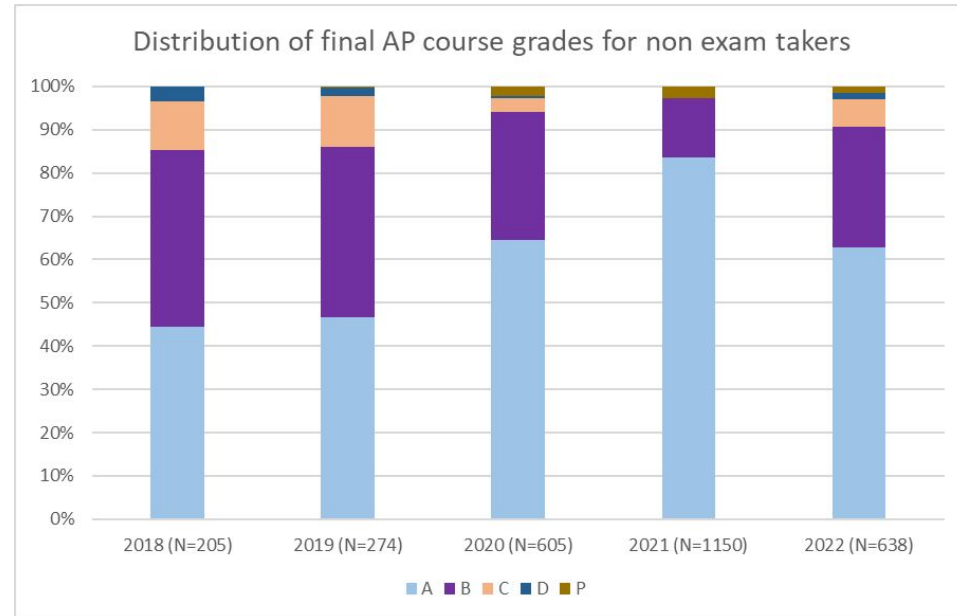
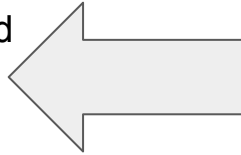
- Not required for Newton students, unlike many comparison districts
- Many colleges and universities have begun limiting their practices of accepting AP coursework and exam scores for college credit
- Exam participation has shifted for Newton 12th graders beginning in 2019-2020; around two-thirds of NPS 12th graders now take the exam compared to 85-90% previously



Who are the non exam takers?

- Beginning in 2019-2020, over half of non exam takers received an A in their AP course; around 90% of non AP exam takers received an A or B in the course
 - In Newton in recent years, students receiving an A or B in the course were more likely to score a 3, 4, or 5 on the exam

This is over 550 exams in 19-20 and 21-22 compared to 200-300 exams in 17-18 and 18-19



Where did 12th grade non exam takers enroll after high school?

- Around 40% of 12th grade non exam takers enroll in a postsecondary institution on the US News “Top 50 National Universities” or “Top 50 National Liberal Arts Colleges”
- Most frequent postsecondary institutions for 12th grade non exam takers in 2021:
 - UMass Amherst (40 students)
 - University of Vermont (14 students)
 - Boston University (14 students)
 - Northeastern University (12 students)
 - Harvard University (11 students)
 - Tufts University (11 students)
 - UMass Lowell (10 students)

What's happening with current AP students?

- Based on a student survey this spring (still active), of 1,016 grade 12 AP course enrollments, 129 did not register for the AP exam at all and 42 canceled their exam (17%)
- For those who did not register, majority said they didn't want to (some said this was because of stress or pressure); many said they would not get the AP credit in college; others did not want to pay the fee
- For those who canceled, the majority said their college would not accept AP scores for credit

Comparison districts

- Majority of our comparison districts have different policies around access to AP courses and AP exam taking (page 5 of report)
- These are 2 key variables that impact AP scores
 - Limited access to AP courses limits the exam taking population
 - Requiring AP exam participation also limits the exam taking population
- Makes comparing Newton AP exam scores to these districts difficult, as the exam taking populations are different

Conclusions

- Efforts to increase access to AP courses are resulting in increased enrollments for all students
- The population of students participating in AP exams has changed beginning in 2019-2020, with a reduction in 12th graders participating
 - Likely due to timing of exam and shifts in practices of colleges/universities
- Many of these 12th graders not participating in AP exams received an A or B in their AP course, which is related to higher exam scores for Newton students
- Exam participation requirements and/or prerequisites remain unchanged in many peer communities, making comparison difficult
- Additionally, the schedule shift in the high schools has required adjustments to the timing and implementation of the rigid AP curricula
- COVID also likely plays a role in scores: students taking the tests in 2021 and 2022 were beginning their high school career during the pandemic



How is this data being used to inform practice?

- Instructional leaders are continuing to review AP course and exam results in each department and refine supports in place to ensure all AP enrolled students are able to be successful in their courses and assessments
- Departments are looking at specific course data to analyze patterns and results to identify supports for individual students and courses as a whole
- Teacher teams and instructional leaders are continuing to evaluate adjustments to implementation of AP curricula because of the new schedule; these are being re-evaluated and further updated in each course