

# In-depth Advanced Placement Analyses 

by Fred Cohen

Among the many new and exciting Instructional Data Warehouse(IDW) reports is a dashboard visual ization which all ows the user to compare Advanced Placement examination scores to the course grades students received from their teachers. Tackling a similar issue in the December issue of the IDW newsletter, Nassau BOCES Elizabeth Y oung asked, Regents Examination Results vs. Final Course Grades: Do They Agree? Read that newsletter to see her in-depth and scholarly analysis of this issue and see how to use another new IDW report, Regents CourseGradeAnal ysis by Subgroups.

Comparing A dvanced Placement scores and Advanced Placement course grades, however, presents unique issues for school administrators and teachers. Most Regents courses are either required for graduation or required for an Advanced Regents Diploma. Advanced Placement courses, however, are all elective, and AP examination scores do not look at all likeAP course grades. Regents scores, al though technically scal e scores, do look just like course grades, both using a range of 1-100 with 65 considered a passing score (Note that with current Regents exams, a scale score of 65 no longer suggests that the student earned $65 \%$ of the avail abl e points.)

But AP scores are not easily compared to course grades. A snapshot of the College Board Scoring matrix is di splayed below. (See https://apstudents.collegeboard. org/ about-ap-scores/ap-scorescale etable for a more detai led anal ysis.)


## Grading Issues with AP Courses

The College Board does not offer guidance for how high school teachers might determine course grades for AP students. Thus, teachers, counselors, and admini strators are left with a number of difficult decisions. The first problem, of course, is that teachers must enter their final course grades they receive their students AP scores sent to districts in the summer. In contrast, even though advised not to do so, many Nassau County school di stricts still use Regents examination scores as a component of final course grades, averaging in a Regents scale score with four marking period percentage grades. But even if districts received AP scores before the end of the semester, translating scores of $1,2,3,4$, and 5 to numerical course grades would be quite difficult, especial ly because the College Board cites only college grade equivalencies in their scoring table

## EncouragingAP Course Participation

There is al so another issue facing school personnel in determining grading practices for AP courses. Many feel that it is imperative to offer the most chal lenging courses to the greatest number of students. For that reason, each year, Nassau County high schools try to offer moreAP courses and encourage more students to take these chal lenging courses. A quick look at the current AP Summary Table for Nassau County in the IDW shows that the AP participation index has increased from 2.52 tests taken per students in an average grade in 2015 to 2.96 tests taken per average enrollment in 2021.

Regular IDW users might note that the IDW has been producing this table for at least 15 years. One can go back in our newsletter archives to view theFebruary, 2012 Newsletter to se data from 2006 to 2011 (

As shown below, the dashboard consists of five sections. Section 1, at the top, all ows the user to sel ect year, test, and location and al so offers test counts which are explained on the introductory purpose page The two visual izations, Sections 2 and 3, are accompanied by tables (Sections 4 and 5) below them, The tables show number counts and allow drill-throughs to student names, score details, and demographic information.

## TheAdvance Placement Vs. Course GradeDashboard

This visual ization divides course grades into columns representing four course grade ranges. Refer to the color code (circled in red at the top left of Section 2) and the table below it to see that over $80 \%$ (530/656) of the students in the 90+column had AP examination scores of 3, 4, or 5 . One must remember that the columns do not necessarily represent equal numbers of students. The 90+column actually represents 66\% of the students. That is why the table must al so be used to correctly interpret the column chart.

The visual ization at the right, Section 3, is a cleverly adapted bubble chart. Each column of bubbles shows the course grades of students who eamed a particular AP examination score. For example, the first column, blue bubbles, shows those students who earned an AP examination score of and al so shows their course grade score on the vertical axis. The larger the bubble, the more students are at that course grade score

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