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If Keystone exams were a graduation requirement

Summary: According to current Pennsylvania law, passing the Algebra I, Biology and Literature Keystone exams will be a graduation requirement starting with the class of 2022. This review of recent Keystone test scores for a diverse group of Allegheny County school districts other than Pittsburgh illustrates the ability, or lack thereof, for students to meet this requirement. In short, a large percentage of the students would not meet the graduation requirement of passing the exams.

During the 2012-13 school year, the Pennsylvania Department of Education developed the Keystone exams for distribution to Local Education Agencies (LEAs) which includes school districts, vocational technical schools, charter schools and online programs. Demonstrating proficiency or better on the Algebra I, Biology and Literature Keystone exams was slated to be a graduation requirement beginning with the class of 2017 but instead has been continually postponed via moratoriums in Act 1 of 2016, Act 55 of 2017 and Act 39 of 2018.

In 2018, Act 158 not only delayed the Keystone exam graduation requirement until 2022 but also provided four alternative pathways for satisfying the requirement. Components of the alternatives include the use of a composite Keystone score; earning a passing grade in an exam-related course; satisfactory completion of substitute assessments; internship, apprenticeship or work experience; college acceptance; etc.

In other words, passing the Keystone exam requirement as a condition of graduation has been effectively nullified. This, after all the time and effort that have gone into developing the exams. School districts could easily make sure everyone gets a passing grade or has internship experience sufficient to meet an alternate requirement. College acceptance in the current environment of declining enrollment at many universities means little regarding academic qualifications or readiness.

Keystone exam scores are broken down into four categories: below basic, basic, proficient and advanced. Across the commonwealth from 2015 to 2019, the number of failing scores (basic or below) in Algebra I rose from 35.52 percent to 36.7, or 3.3

percent. In Biology, failing scores fell 10.4 percent from 41.06 to 36.8 percent while the failing scores in Literature rose from 27.21 to 28.5 percent, or 4.7 percent.

During the same period, the number of passing scores (proficient or above) decreased from 64.48 to 63.3 percent in Algebra I and from 72.79 to 71.5 percent in Literature, both declining 1.8 percent. Meanwhile, passing scores in Biology climbed from 58.95 to 63.2 percent, or 7.2 percent. Clearly, in math and literature, students are moving in the wrong direction from already poor performance levels and are less prepared for graduation than they were five years ago.

While the statewide data provide a basis of comparison for Allegheny County school districts, this *Policy Brief* examines Keystone exam scores and per student spending for Baldwin-Whitehall, Brentwood Borough, Carlynton, Chartiers Valley, Fox Chapel Area, Keystone Oaks, Montour, Mt. Lebanon, Northgate, North Hills, Penn Hills, Shaler Area, Steel Valley, Sto-Rox, West Mifflin and Woodland Hills. These districts were chosen as a disparate geographical grouping within the county. Pittsburgh schools are omitted because their academic achievement has already been thoroughly examined in earlier *Policy Briefs* (see *Vol. 18, No. 6* and *Vol. 19, Nos. 3, 30 and 31*).

For Algebra I in 2015, the average (unweighted) percentage of failing scores—for the districts in the sample—stood at 34.06 percent and passing scores at 65.94 percent. Both averages worsened in 2019 to 40.32 and 59.66 percent, respectively. Failing Biology scores fell marginally from an average of 39.31 percent in 2015 to an average of 39.13 percent in 2019 while passing scores rose slightly from an average of 60.69 percent to an average of 60.87 percent. The average percentage of failing Literature scores rose from 23.46 in 2015 to 30.38 percent in 2019; the average percentage of passing scores dropped from 76.54 to 69.59 percent.

On the Algebra I exam, 11 of the 16 districts experienced declines between 2015 and 2019 in the percentage of students scoring proficient or above while also seeing a rise in the percentage of basic or below scores. The largest decline in proficient or above Algebra I scores occurred in Sto-Rox, falling from 44.78 percent of students to just 15.3 percent earning a passing score or better. On the other hand, the biggest increase in failing scores was posted by students at Brentwood Borough, rising from 32.53 percent in 2015 to 47.7 percent in 2019.

Some of the best performing schools on the Algebra I Keystone exam include Fox Chapel Area, Keystone Oaks, Mt. Lebanon and North Hills. Among these Mt. Lebanon had the highest percentage of students scoring proficient or above in 2019 at 90.2 percent even though that figure represents a slight 1.3 percent drop from 2015.

At the same time, some of the worst performing schools were Penn Hills, Sto-Rox and Woodland Hills. Almost 85 percent of Sto-Rox students, for example, failed the Algebra I Keystone in 2019, an increase of 53.2 percent since 2015.

On the Biology Keystone exam, seven of the 16 districts experienced declines in passing scores from 2015 to 2019 coupled with increases in the percentage of failing scores. The largest decline (88.1 percent) in passing scores and biggest increase (59.5 percent) in failing scores over the period 2015-19 occurred in Sto-Rox. Meanwhile, although Penn Hills experienced the highest jump in passing scores among the examined districts (up 25.6 percent since 2015), it's one of the worst performing schools (along with Steel Valley, Sto-Rox and Woodland Hills), with only 38.7 percent of students scoring proficient or above on the Biology Keystone exam in 2019. Some of the best performing schools, on the other hand, include districts such as Chartiers Valley, Fox Chapel Area and Mt. Lebanon.

Lastly, regarding the Literature Keystone exam, 12 of the 16 districts saw declines in the percentage of students scoring proficient or above along with concurrent increases in those scoring basic or below. Again, from 2015 to 2019, the largest drop (68.2 percent) in passing scores was in Sto-Rox. The biggest increase in failing scores over the same period occurred in Brentwood Borough with an increase of 173.2 percent from 14.46 percent of students in 2015 to almost 40 percent in 2019.

Some of the poorest scoring schools on the Literature Keystone exam include Penn Hills, Steel Valley and Sto-Rox. In 2019, for example, only 18.8 percent of students at Sto-Rox earned passing scores while 81.2 percent failed. Meanwhile, Fox Chapel, Montour, Mt. Lebanon and North Hills constitute some of the better performing schools with 93.5 percent of Mt. Lebanon's students passing the Literature Keystone exam in 2019. However, the district did experience a modest decline of 2.3 percent in passing scores from the 2015 level.

In sum, these exam results point to three very important conclusions. One, there is a very wide disparity in academic achievement among the 16 school districts on the Keystone exams. Two, the trend in scoring on Algebra I and Literature since 2015 shows academic performance is generally weakening rather than improving. Three, for many of these 16 high schools, the latest Keystone exam results would disqualify large percentages of students from graduating without access to alternative pathways.

Along with these overall disappointing performances, average daily membership (ADM) has fallen at several schools while current district expenditures per ADM have consistently risen. Note that enrollment is the count of all students entering school in the fall, while ADM represents the average daily attendance—those who showed up—throughout the year. Current expenditures, moreover, includes categories such as instruction, support services and operation of non-instructional services.

Of the 16 districts, 11 experienced overall declines in ADM from the 2014-15 academic year to 2018-19, ranging from a drop of 0.13 percent in Brentwood Borough to a downswing of 11.24 percent at Northgate. Meanwhile, the largest jump in ADM from 2014-15 to 2018-19 occurred in Baldwin-Whitehall at just 5.27 percent.

On the other hand, 15 of the 16 districts expanded current expenditures per ADM from school year 2014-15 to school year 2018-19. The range spans from an increase as low as 4.23 percent at Montour to a high of 37.25 percent at Northgate. Only Baldwin-Whitehall lowered current expenditures per ADM with a drop of 1.4 percent.

In short, spending per ADM continues to rise despite disappointing to dismal Keystone exam scores at many schools that have, in fact, worsened in math and literature since 2015. Given the spending levels and all the programs designed to improve learning, it is apparent that the ongoing poor or declining performance at many schools is the result of far more fundamental issues than the education experts are able or willing to understand or overcome. For one thing, Allegheny Institute research has shown a very clear correlation between attendance and academic performance, but there seems to be no real concerted effort to fix the problem.

Numerous factors contribute to one's success in learning. But gaps in education are not going to be eliminated by simply throwing more money at the problem. Pennsylvania must adopt school choice measures that allow parents of children who are forced to attend failing schools to put their children in schools with proven track records of success. Until that happens, there is no real pressure on school districts to push harder to improve student outcomes as long as the funding keeps coming.

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