

Impact of Changes to New Mexico's SAM School Rating System Over Time

PREPARED BY

MOMENTUM STRATEGY & RESEARCH

Introduction

As national experts in the field of alternative education measurement and accountability, New America commissioned Momentum to review the SAM report cards over the last five year to:

1. Identify any trends of note,
2. Consider whether trends are related to changes in outcomes or changes in report card measures and/or metrics, and
3. Consider whether the measures included in the NM report cards are appropriate for use with SAM schools.

The general goals of an accountability system are to a) differentiate between schools based on schools outcomes so that the public can distinguish between the available options and b) to provide information upon which schools can act for purposes of working with students and planning for school improvement.

Thus, report cards and/or measures that do not produce differentiated outcomes are not effective at meeting these goals. If all schools get 'As', for example, there is no way to the public to reasonably judge between them and there is no push for schools to improve. Similarly, if all schools receive 'Fs' there is no information to act on because there is no real distinction between the schools. And when the schools serve similar populations of students one must question whether it is the schools that are "bad" or whether the accountability system is simply ineffective at detecting differences or inappropriate for use on the population being measured.

Background

Over the last five years there has been a shift if the report card ratings for New Mexico's Supplemental Accountability Model (SAM) schools, one that has gone from a system producing more positive ratings that seemed to have some amount of differentiation between schools to a system producing uniformly negative rating with little to no differentiation between schools.

In order to tease apart why such a shift has taken place, Momentum has reviewed the details of the report card grades and specific outcome data of New Mexico's over that five year period (2012-2013 to 2016-2017). This document provides an overview of the data and discussion of notable trends where they are found.

SAM Schools

According to data obtained from the New Mexico Public Education Department, there were 31 SAM schools in operation 2012-2013 and 36 SAM schools in 2016-2017.¹ Of the current 36 SAM schools, 17 are charter schools and 19 are traditionally run district schools. Table 1 shows the breakdown of SAM schools by charter and traditionally run schools over the five years investigated.

¹ Based on schools receiving a 1 under the SAM variable in the "Page 1 2017" data table found here: <http://aae.ped.state.nm.us/DataTableLinks.html>.

Table 1 Breakdown of SAM Schools by Charter and Traditionally Run Schools between 2012-13 and 2016-17

Year	Total SAM Count	Charter SAM Count	Traditional SAM Count
2012-13	31	11	20
2013-14	33	13	20
2014-15	34	14	20
2015-16	36	17	19
2016-17	36	17	19

As shown in Table 1, SAM school growth has occurred through the authorizing of additional SAM charter schools over the last five years. These charters are authorized by the state Public Education Commission as well as a few different school districts. (See Table 2).

Table 2. SAM Charter School Authorizers

Authorizer	SAM Charters Authorized
Albuquerque Public Schools	6
Deming Public Schools	1
New Mexico Public Education Commission	9
Taos Municipal Schools	1

The majority of New Mexico's current SAM schools serve students in grades 9-12 (23 of 36, or 64%), while 10 (28%) SAM schools serve both middle and high school grades, two serve only grades 10-12, and one (ABQ Sign Language Academy) serves students in grades K-12. (See Table 3).

Table 3. Grades Served by SAM Schools in 2016-2017

Grades Served	Count
K-11	1
6-12	4
7-12	6
9-12	23
10-12	2
All	36

Based on 2015-2016 enrollment data, 6,458 students attended a SAM school in the fall, for an average of 179 students per SAM school. However, SAM school enrollment ranged from a low of 14 students to a high of 420. Table 4 provides a breakdown of SAM schools by enrollment size.

Table 4. Fall 2015 Enrollment across SAM Schools

Fall 2015-2016 Enrollment Range	Number of SAM Schools (N=35)*
Less than 50	2
51-100	7
101-200	13
201-300	5
301-400	7
More than 400	1

*Enrollment data was not reported for one of the SAM schools.

A review of each SAM school's current website also provided information on the missions of each schools and, in some cases, provided information on the target student population of the schools. From our review we gleaned that New Mexico's SAM schools range in mission and targeted student considerably. Some schools target special education populations, while others serve students that have recently been released from a detention center, and still others focus on parenting teens. Some SAM schools state a clear mission to help students recover high school credits so that they can return to their original high school and graduate with their class, while others have a mission to provide a safe place for troubled youth. From the information gathered only one set of schools, the New America Schools, share the same mission and target student population but even those schools differ markedly in the student demographics in each location. Thus, no two SAM schools seem alike.²

SAM Report Card Grades

Momentum collected report card data for all SAM schools for each year between 2012-13 and 2016-17. This included the overall report card grades, the grades for each indicator within the report cards, and the actual values for each of the outcomes reported on each report card. Figure 1 shows the percentage of SAM schools receiving grades A-F each year.

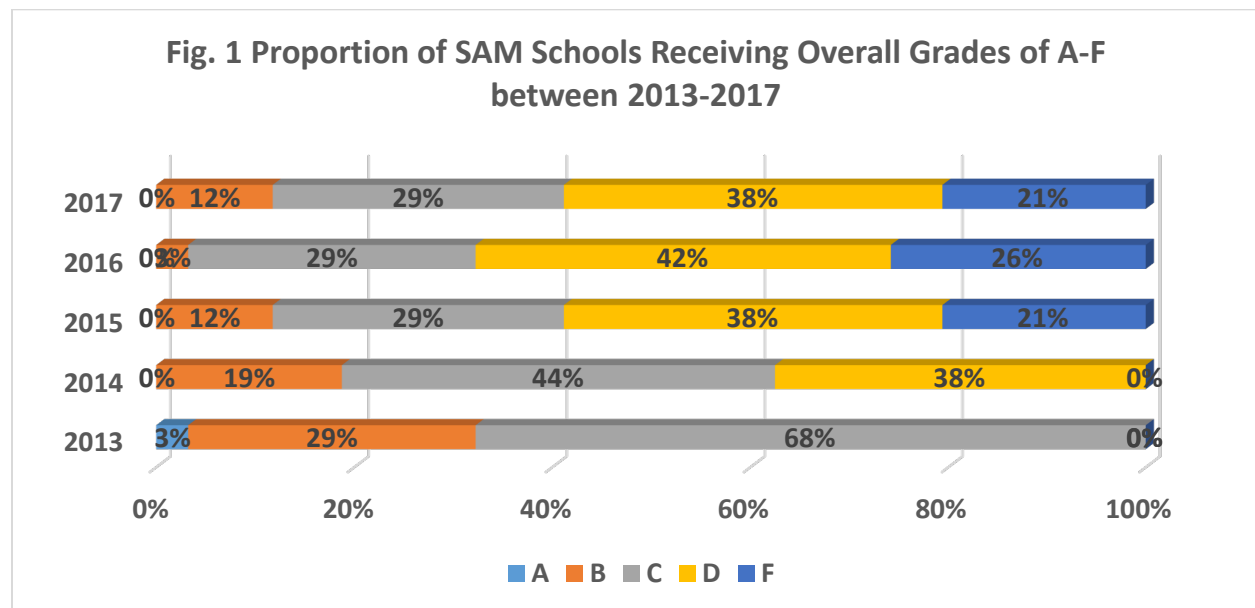


Figure 1 illustrates a large shift in SAM grades over the five year period, with no SAM schools receiving a grade lower than a C in 2012-13 to less than half of schools accomplishing better than a C in 2016-17. To

² Though the same could be said of schools that do not qualify as SAM schools, the ways in which SAM schools are different could have real implications for schools' outcomes. Here is why: More traditional schools have a range of students, while some may fall into one or more of the student population described in the previous paragraph the proportions is likely to fall with the "norm" (i.e., what is normal for all schools). SAM schools, on the other hand serve much larger proportions of these students. The extent that special education students, parenting teens, former adjudicated, and or credit deficient students perform differently—and evidence suggests that they do²--that having a large proportion of them will impact schoolwide averages. Whereas schools with the normal amount of such students will wind up (most likely) with more normal (i.e., average) outcomes.

look at why the overall grades are shifting downward over time, Momentum reviewed the percentages of SAM schools receiving A-F grades on each report card indicator: Current Standing, School Improvement, Student Growth, Opportunities to Learn, Graduation Rates, and College and Career Readiness, as well as the average SAM outcomes on the measures that make up each indicator grade. The following sections review each indicator in detail, pointing out trends as appropriate.

Current Standing

Current Standing includes measures of proficiency rates in reading and math, as well as a growth component that factors both student and school characteristics into the model.

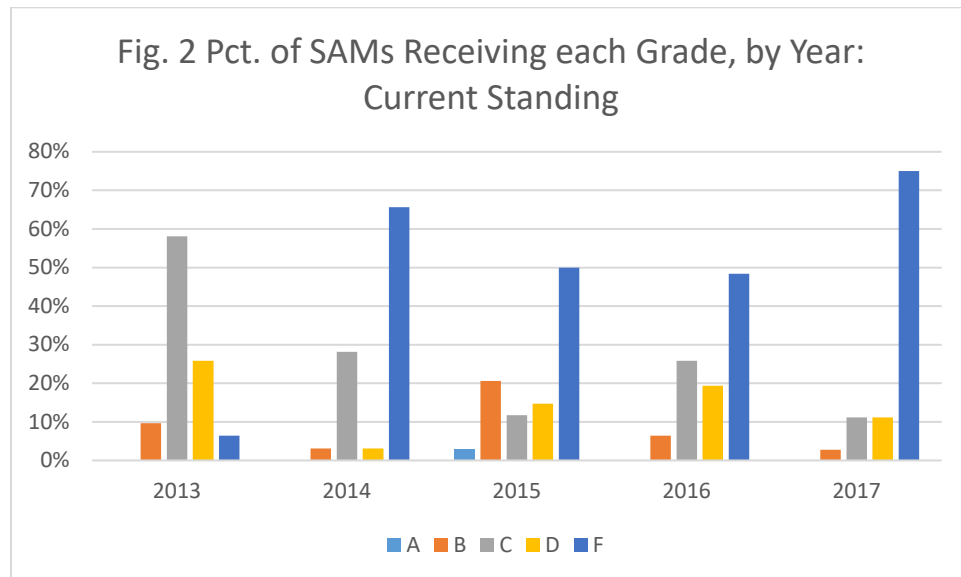
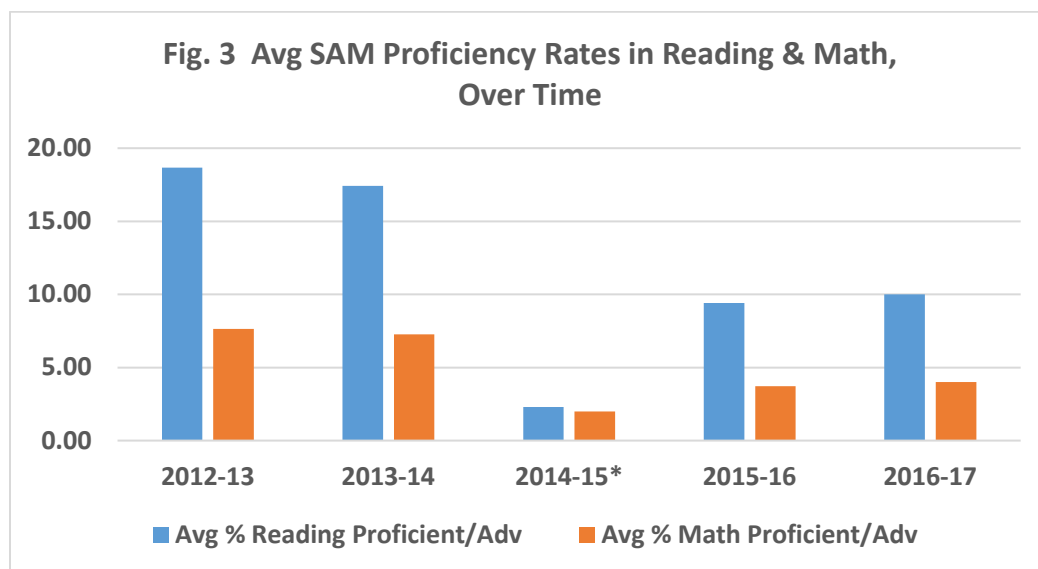


Figure 2 shows a lot of year to year variation in the percent of SAM schools receiving each grade under the Current Standing indicator —rates on which SAM school averages declined markedly in 2014-15 (Figure 3)—the first year that New Mexico administered the PARCC assessments.



While average proficiency rates of the SAM schools have increased over the 2014-2015 averages, ever higher percentages of SAM schools are receiving Fs on the Current Standing indicator (Figure 2),³ particularly in 2016-17. A review of changes in the NM PED accountability manual revealed that there was a change in the distribution of weight between the proficiency rates and the growth outcomes in August of 2017.⁴

Unfortunately, the report cards do not include values associated with the growth outcomes for all students, rather they only include the points that the school received based on those growth outcomes. Therefore, we were not able to trace whether the shift in weight for the growth component of current standing may be contributing to the increase in Fs in 2017.

Regardless, there is nothing in the technical guidance to suggest that the current standing outcomes are augmented in any way to account for a schools SAM status. While considering the percent of students that are present for the full academic year (FAY) and students' prior year proficiency may help, it is unclear whether overage students are included in the calculations. If not, what the proportion of students served by the SAM schools are included in the rating. This may be a more pressing issue for the growth component, since students are matched based on the prior two years state assessment scale scores.

School Improvement

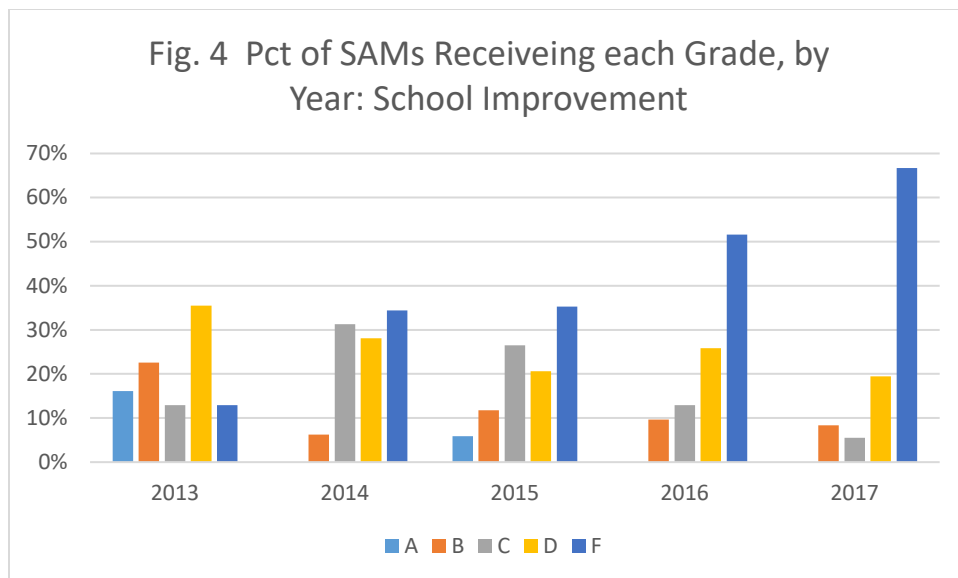
School Improvement is a measure of how schools' average proficiency rates are changing over time, compared to how the school average rates were predicted to change, given specific school characteristics. The predictions are based off of regression models. Unlike the growth measure used under the Current Standing indicator, the model used here does not consider whether the students were proficient in the prior year.

As described in the schools' report cards, school improvement outcomes can be positive, indicating better than predicted change; negative, indicating lower than predicted change; or zero, indicated that the change was exactly as expected based on the model.

Figure 4 shows the percentage of SAM schools receiving each grade on the School Improvement indicator, and Figure 5 shows the average SAM school growth outcomes in reading and math over time.

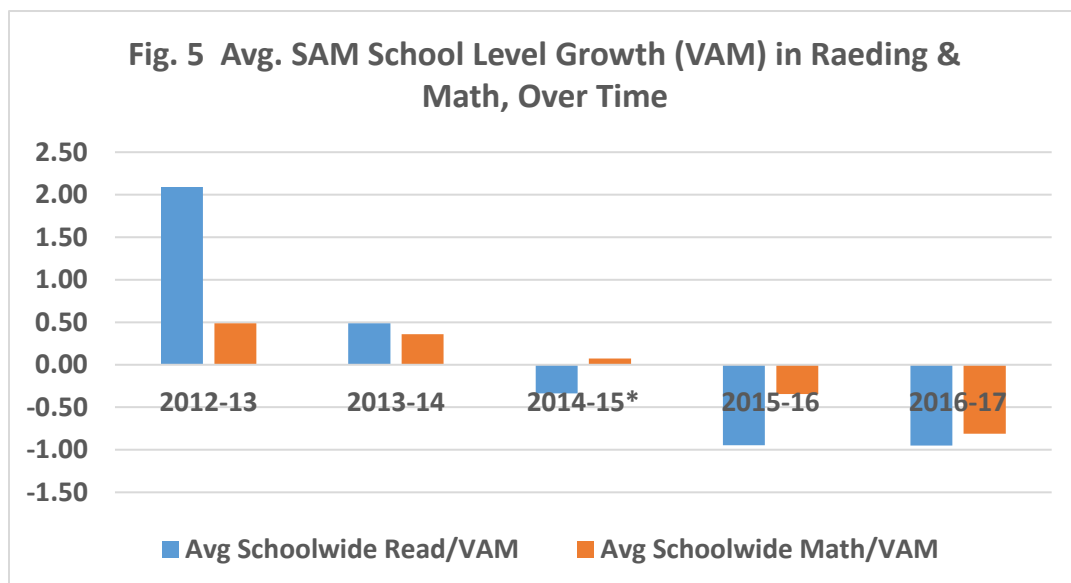
³ It should be noted, however, that in 2016-17 reports many of the proficiency rates were masked due to new privacy laws being implemented in the state. Masked data included figures like <2%, <5%, <10% and the like. For purposes of this analysis, Momentum replaced these figures with the average between the percent indicated and zero. For example, <2% was replaced with 1% and <5% was replaced with 2.5%. Across a large group using the average would like create a close approximation of the real average. However, since there are only 36 SAM schools it is possible that this method of replacement has resulted in an average that is off by a few percentage points.

⁴ In 15-16 proficiency rates and growth outcomes were equally weighted in the final current standing grade—at 15 points apiece. In 16-17, the PED went back to weighting proficiency rates more heavily in the current standing grade—at 20 points possible for proficiency rates and 10 points possible for growth outcomes.



As with the Current Standing grades, Figure 4 shows that the percentage of SAM schools receiving a grade of F for the School Growth indicator has increased steadily over time, while the proportion of SAM schools receiving Cs or better has decreased.

Also similar to the proficiency outcomes, Figure 5 shows that the average school growth values have decreased each year between 2012-13 and 2016-17 in both math and reading.



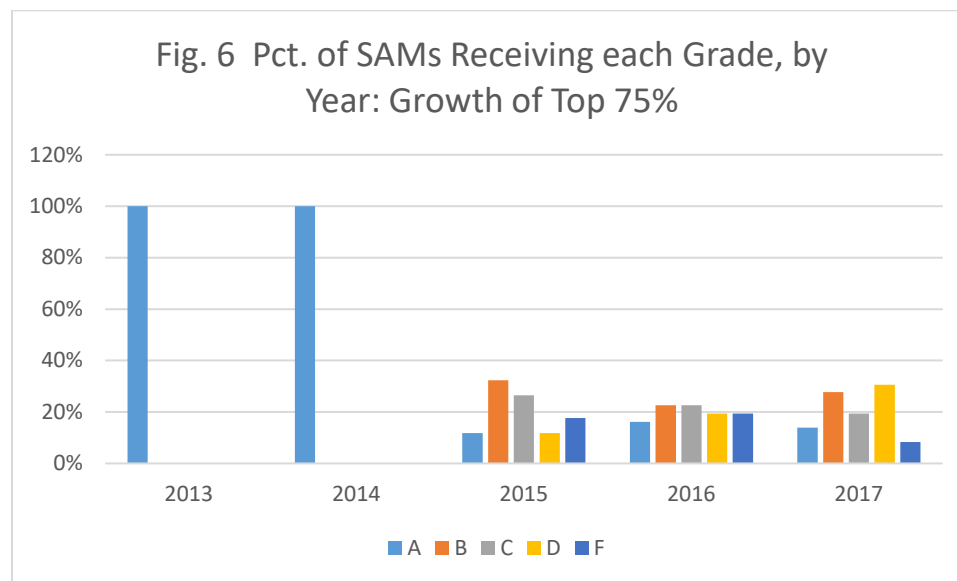
Again, there is no indication in the 2017 accountability manual, that the school growth measures are adjusted in any way for SAM schools specifically. The models do consider prior year performance and percent of students that were present for a full academic year, but does not take into account the proportion of students that are overage and/or behind in credits. For schools serving primarily overage

students (i.e., 19 year-old or older), ratings are likely based on a fraction of the overall students served each year.

Student Growth

Student growth is measured using a complex regression equation that factors (i.e., controls) for student demographics and academic characteristics as well as some school characteristics. Two separate groups are reviewed for each school—the growth of the top 75% (as measured by prior year proficiency) and the growth of the bottom 25% of the students enrolled in the school.

Figure 6 shows the percent of SAM schools receiving each grade on student growth for the schools' top 75% students and Figure 7 shows the average school values for growth in math and reading.



In the first two years reviewed here, all SAM schools achieved an A on the student growth measure for Top 75% students. Beginning in 2014-15 (the first year PARCC was administered), however, SAM grades began to spread out across each grade level. This should be viewed as positive, as this indicator seems to be able to differentiate among the SAM schools, rather than all receiving As or all receiving Fs.

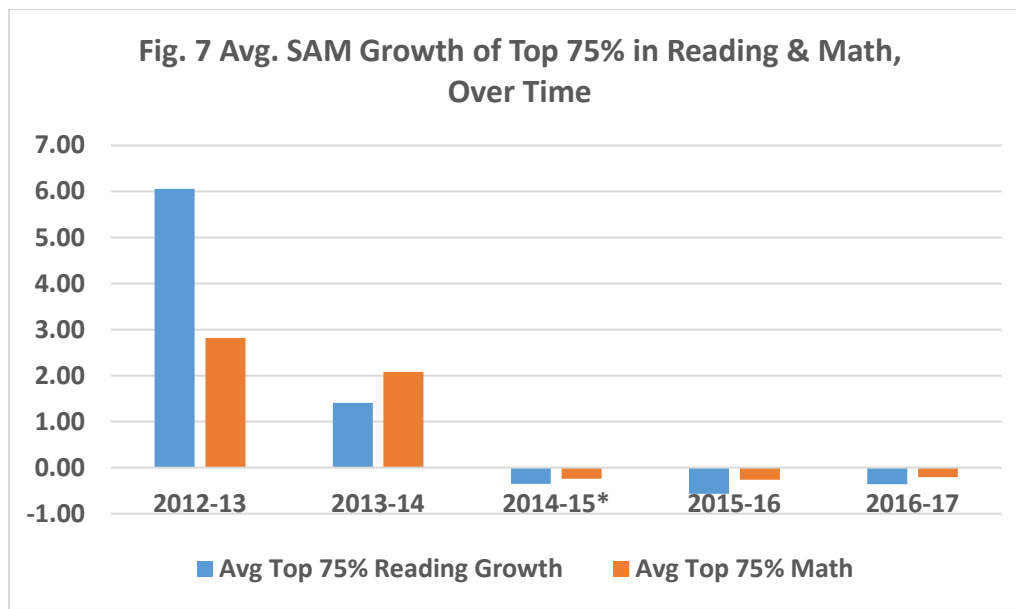
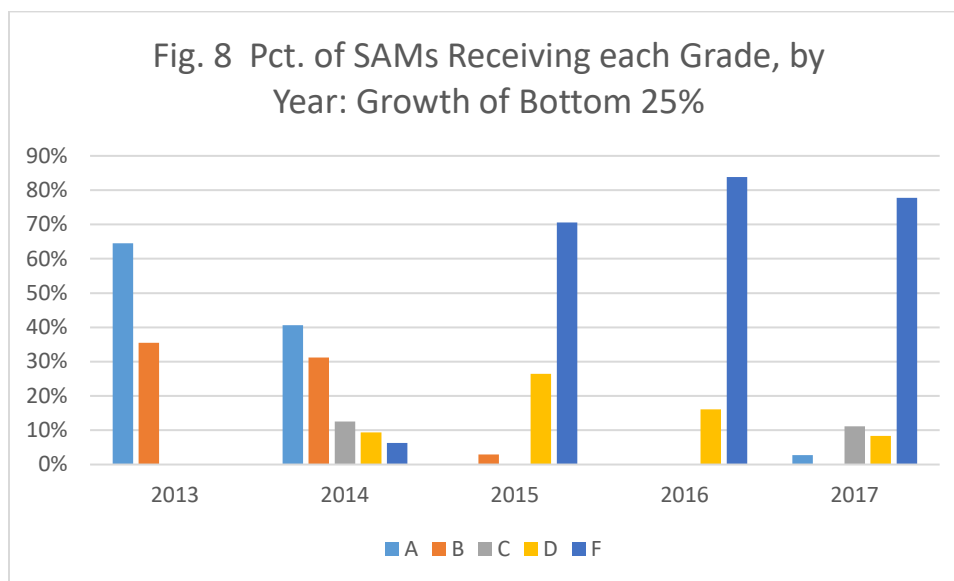


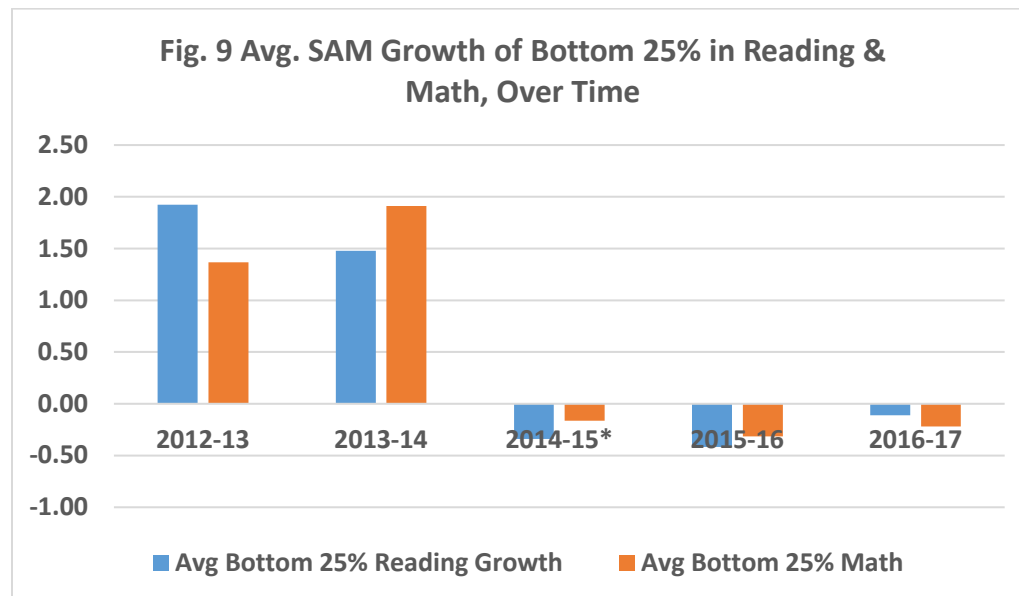
Figure 7 shows the average SAM growth of the Top 75% students, Here we see that the average SAM school growth rates were much higher (thus the As) prior to the introduction to PARCC.⁵ Beginning in 2014-2015, the average SAM growth outcomes for the schools' top 75% students were negative.



The trend is almost reversed for the SAM grades related to the growth of the lowest performing 25% students (Figure 8). The SAM schools were more differentiated prior to the introduction of the PARCC,

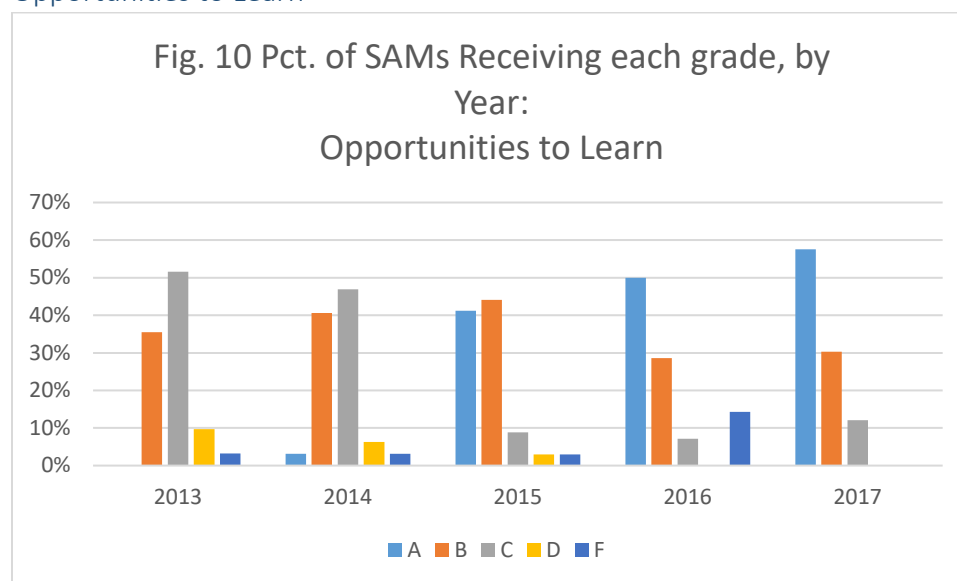
⁵ Whether this decline is due to the PARCC assessment being more difficult for SAM students or whether there were other changes (such as slight changes in the growth equation) that also occurred in that same year is unknown.

with a majority of SAM schools receiving Fs over the last three years. Only in 2016-2017 have a few SAM schools received above a D.



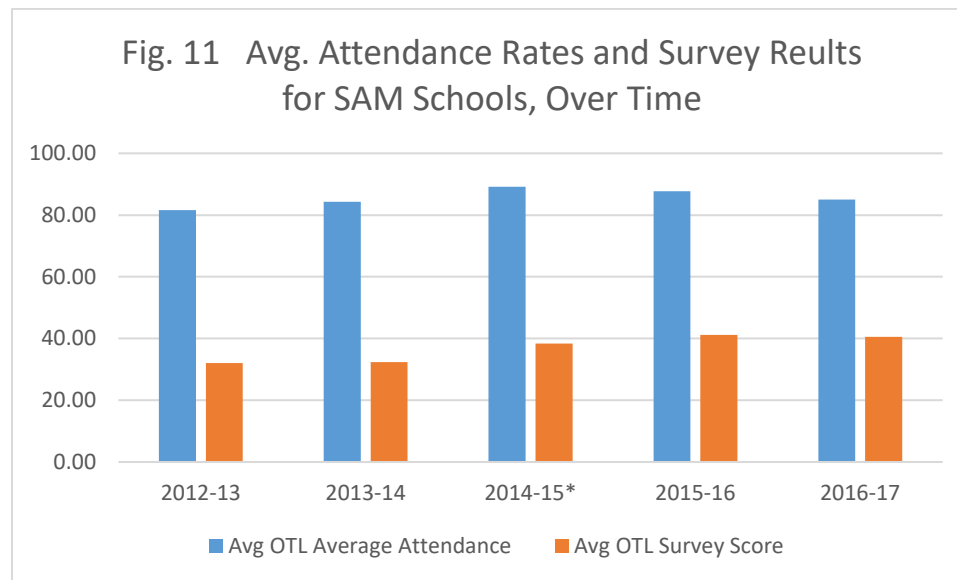
However, the average growth values for the SAM schools show a similar picture to that of the average growth of the top 75%—namely they were positive in 2012-13 and 2013-14 then negative thereafter. (See Figure 9). Again, it would be good to know whether any other revisions were made to the computations of the growth model in 2014-2015 that might have contributed to the stark decline in growth outcomes, or if the PARCC is simply more difficult for SAM students.⁶

Opportunities to Learn

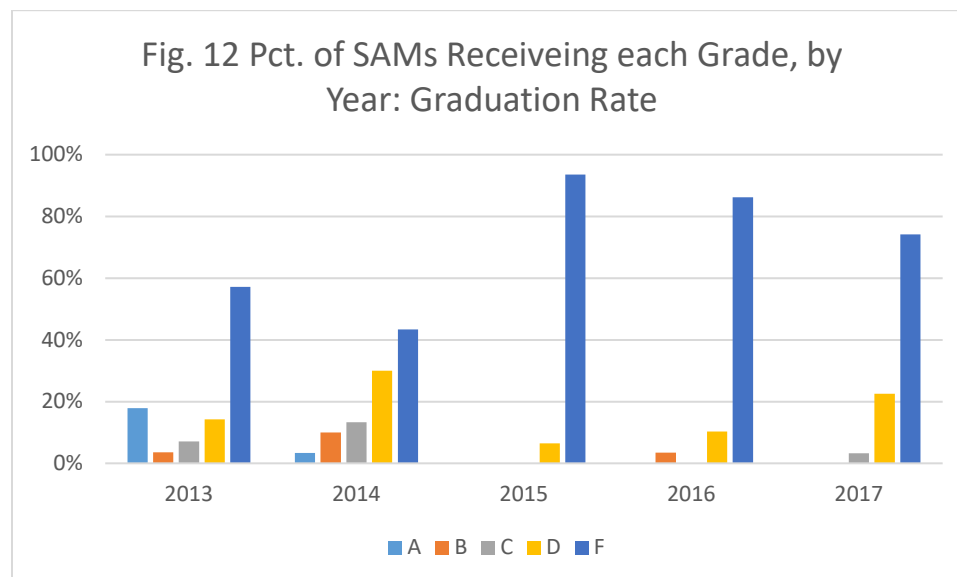


⁶ Also, it would be good to know whether all high schools saw a similar dip, on average.

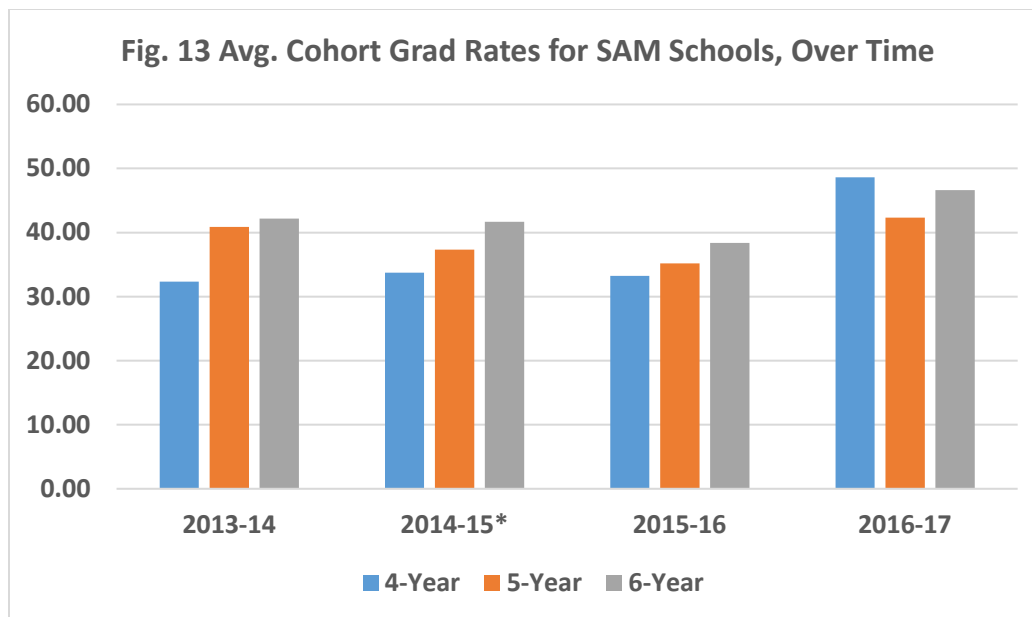
Figure 10 shows that SAM school ratings on the Opportunity to Learn indicator have been getting steady better, with at least 50% of SAM schools receiving an A over the last two years. While average attendance rates for SAM schools have hovered around 80% (Figure 11), their average OTL survey scores have been slowly getting better.



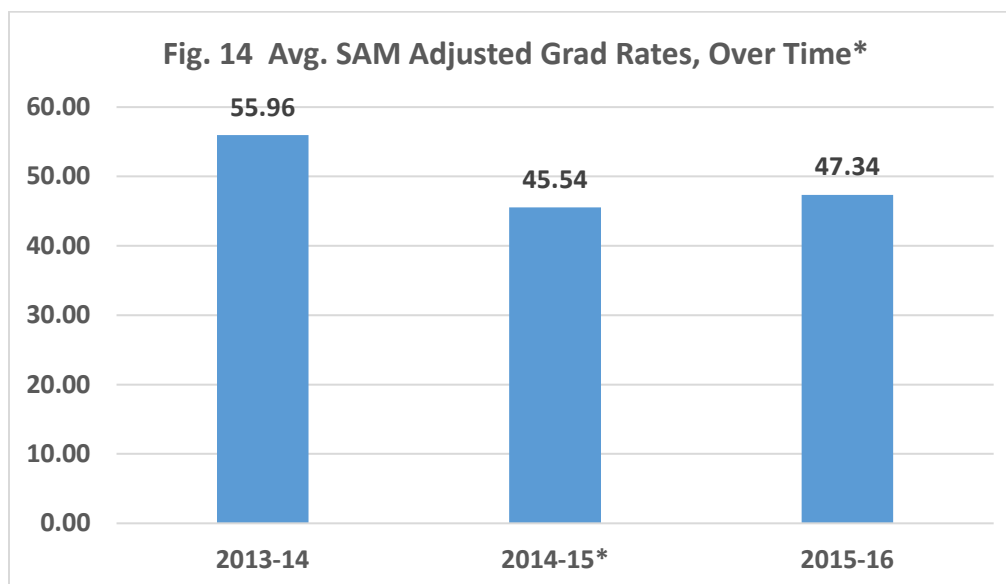
Graduation Rates



The graduation rate indicator is another area for which SAM schools saw more differentiation early on in the five year period, but on which most SAM schools now receive Fs (Figure 12). On the positive side, the percent of SAM schools receiving Fs has been slowly decreasing since 2015. (See Figure 13).



Though SAM school graduation ratings are based on an adjusted graduations rate, which we will review in a moment, Figure 13 looks at the average 4-, 5-, and 6-year cohort graduation rates for over time. Between 2013-2014 and 2015-2016 the pattern of the cohort rates were fairly consistent, stair stepping up slightly with each successive cohort year. However, there was a large increase in each cohort rate in 2016-17, leading with the 4-year rate.



Unfortunately, the state did not report the adjusted SAM graduation rate on the 2016-17 report cards, so we cannot see whether the adjusted rate improved as much as the cohort rates did in that year. We do, however see that the average SAM adjusted grad rates declined by over 10 percentage points between 2013-2014 and 2014-2015, then had a slight uptick the following year—even though the average cohort based graduation rate averages remained relatively flat across those same years.

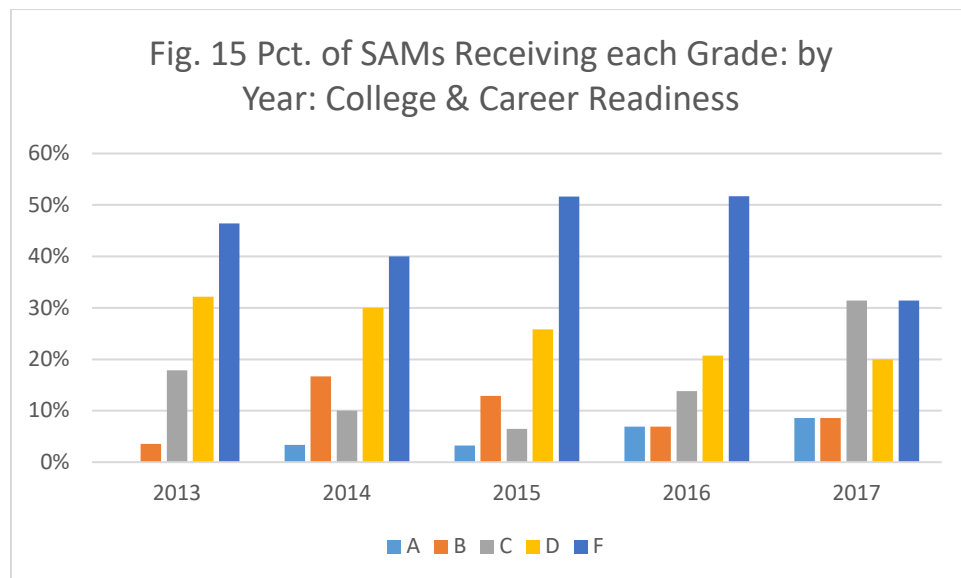
If we are understanding the technical guidance correctly, all students that attend a SAM school that have passed their 4th cohort year are considered eligible seniors (as long as they were enrolled in the SAM school during the first quarter count). Because the SAM adjustment includes the percent of eligible seniors (enrolled in the fall) that graduate by the end of the year, SAM schools may be “penalized” for students that are over age and far behind in high school credits when they enter the school.

New Mexico may want to consider, instead, using the extended year cohort rates to grade SAM schools. Several other states utilize extended year cohort rates for rating their alternative high schools, including Arizona, Colorado, and Ohio. In fact, Colorado rates all high schools on their 4-, 5-, 6- and 7-year cohort graduation rates, assigning the rating based on whichever rate is the highest for each school. Ohio, on the other hand, rates its SAM-like schools on each cohort rate separately.

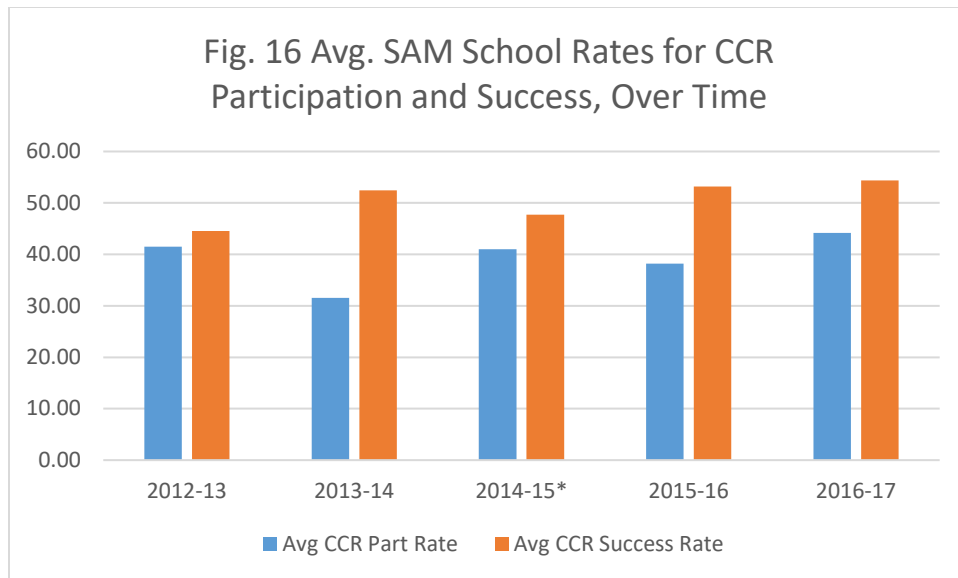
At-least for SAM schools, New Mexico may also want to consider weighting each cohort equally, rather than assigning fewer points for each of the longer cohort durations.

College & Career Readiness

College and career readiness is made up of the percentage of students to participating in and scoring college or career ready on a qualifying assessment or earning credits in dual credit or career course work. This measure seems particularly well suited to schools serving over age students given they support schools that allow students to earn college credit and/or make progress toward their career goals (by earning career entry scores on assessments like WorkKeys or the Armed Services Vocational Assessment Battery (ASVAB)) while enrolled in public high schools.



Indeed, the measure does seem to do a good job of differentiating among the SAM schools, given that some schools received each grade for nearly all of the last five report cards (Figure 15). Figure 16 outlines the average participation and success rates among SAM schools—showing that average SAM school CCR participation rates hover around 40 percent, and the average success rate among SAM schools is around 50%.



Summary

SAM school grade have been on a decline for the majority of the last five year, in nearly every indicator area. However, in some instances the trend seem like it could be reversing-but slowly. In 2016-2017 over 50% of SAM schools did receive an overall grade of D or F, the proportion had decreased, and have seen that higher proportions of SAM schools are receiving overall grades of B and C.

The Indicator areas for which the majority of SAM schools receive a D or an F include:

- Current Standing,
- School Improvement,
- Student Growth of the bottom 25%, and
- Graduation Rates.

Current standing, school improvement, and student growth appear to have declined in the same year that PARCC was first administered and weighting and computational changes were put into place.

The indicator area in which increasingly higher percentages of SAMs receive As or Bs includes:

- Opportunities to Learn

Average SAM school attendance rates and survey outcomes have been slowly increasing over the five years investigated, and the corresponding grades have been increasing as well.

The indicator areas that seem to differentiate between SAM schools quite well include:

- Student Growth of the top 75% and
- College and Career Readiness

Not surprisingly, there is a lot of variation in the SAM school outcomes driving the ratings in these two areas.

Questions worth Exploring

- Did overall high school grades for Current Standing, School Improvement and Student growth show a similar drop in 2014-2015?
 - Was this an implementation dip statewide or were SAM dips unique
- How would grades change if each cohort grad rate was worth the same possible points?
- Can we find data on the average scale score of the bottom 25% from each school?
- Is a senior defined by age or credits?
- How would these schools be rated in other states alt systems?