Senate Education Committee
March 22, 2011
Keystone Exams, PVAAS and 4-Year Graduation Rate

Good afternoon Chairman Piccola, Senator Dinniman and members of the Senate Education Committee. Thank you for the opportunity to share information with you today regarding three important topics: Keystone Exams, Pennsylvania Value-Added Assessment System (PVAAS), and the new 4-year cohort graduation rate. Two of my colleagues are with me this morning. Rich Maraschiello is our expert on assessment issues and has been working on the Keystone Exam initiative since its inception. Kristen Lewald is our expert on PVAAS, and like Rich, has been working on that project since it began about ten years ago.

Keystone Exams

As I am sure you are all aware by now, the Administration is advancing a budget proposal for next year which includes an assessment line item that is absent funding for the Keystone Exam continued development and administration for 2011-12 only. This was a very deliberate decision and was made for two important reasons. First is the cost associated with exam development during a very challenging fiscal year; the second reason is the need to provide schools more time to align their curriculum and instruction to these more rigorous assessments.

First, let me provide a status report on the Keystone Exam development and implementation through 2010-11:

- Three exams have been developed and will be administered statewide during the first three weeks of May: these include Algebra I, Literature and Biology. These exams were developed first because they will ultimately replace the 11th grade PSSA.
- Three exams will be field tested, or piloted, this spring: Algebra II, Composition and Geometry. The field test involves students "testing" the test by responding to the questions that have been developed. Their responses are then analyzed to determine whether or not each question is of high enough quality to be included in the exam. There is no score assigned to the participating students.
- The content eligible for inclusion on the Keystone Exams for each of these six courses is available to all parents and educators on the Standards-Aligned System portal.
- Four exams are not yet developed. These include US History, World History, Civics and Chemistry.

Interest in participating in the exams by schools has been greater than originally anticipated. Over 470 of 500 school districts and more than 50 charter schools have registered to administer the initial three exams this spring. We have received calls and emails from several nonpublic and private schools that also wish to participate in the Keystones.

The Keystone Assessment vendor is Data Recognition Corporation, or DRC. In addition to being responsible for the development, publishing, scoring and reporting associated

with the exams, DRC is also under contract to develop the Classroom Diagnostic Tools and Voluntary Model Curriculum that support the exams as well as our broader efforts to align teaching with all state standards, raise academic expectations and provide real-time feedback on student learning. These two tools are aligned with the course content that is tested with the Keystones. Teachers can utilize the lessons from the Voluntary Model Curriculum and then monitor student achievement on the eligible content using the Classroom Diagnostic Tools.

Now, let's return to the two reasons for the one-year pause in the Keystones as recommended by the Administration. First, due to the significant interest by schools in using the Keystone Exams, the anticipated cost of continuing the implementation as originally scheduled is $24 million for 2011-12. These costs would be in addition to the $36 million already in the education budget line item for assessment. By delaying the exams for one year, the savings during this year of fiscal challenges is substantial.

But perhaps more importantly, we have discovered through this past year of field testing, that the Keystone Exams are doing exactly what we intended – creating rigorous expectations for students so they are held to a standard that makes awarding a high school diploma meaningful and consistent across the commonwealth. However, both anecdotal and quantitative data suggest that many students are not yet necessarily prepared for this level of rigor. Let me be clear: we believe they are quite capable of rising to the challenge of the Keystone Exams. We have been on a very fast track in getting these

exams developed. We need to allow the schools enough time to modify local curriculum and increase the rigor of their instruction.

What we have determined is that the local course content identified for Algebra I, Literature and Biology varies widely from school to school, and even from classroom to classroom within the *same* school. Several educators have shared that the content on the Algebra I Keystone Exam actually reflects much of what they have traditionally included in their Algebra II courses. Likewise, some Biology teachers have argued that the content assessed in that Keystone Exam is not what they teach, despite the fact that Pennsylvania biology teachers were deeply engaged in selecting the content for the exam.

Consequently, we are suggesting that our educators need this coming school year to take full advantage of the resources available to support them in better preparing their students for the Keystone Exams. Specifically, the course standards, the eligible content, the Voluntary Model Curriculum and the Classroom Diagnostic Tools: all web-based resources available on the Standards-Aligned System portal and accessible to all commonwealth educators.

With a one-year break to improve local curriculum and allow teachers to adjust to the more rigorous expectations we need to hold for our students, the fairer these higher stakes tests will be for the students who are accountable for passing them to earn their diplomas. When we return to the schedule of Keystone Exams in 2012-13, we can be assured that no one will have the excuse of not having had the time to understand and adequately

prepare for the level of performance expected or the consequences of not achieving those expectations.

Similarly, the 2011-12 school year will be used to allow us to more thoroughly prepare for the project alternative specified in the new high school graduation requirements. While work is well underway on developing this alternative for those who fail to pass the exam after two tries, the professional development, field testing, and scoring consistencies required will take some time. Having an additional year can only enhance the quality of the project element and ensure that it is indeed an *alternative, equally challenging* option. Secretary Tomalis is equally concerned about the importance of retaining a true alternative that demands the same competence as the exams.

The Chapter 4 regulations which contain the new high school graduation requirements regarding Keystone Exams affect students beginning with the class of 2015, this year's 8th graders. A one-year break from the Keystones will not adversely affect these students or those who follow them, provided they participate in this spring's Keystone Exams if applicable.

A one-year delay allows us to save money in the short-term, prepare well, and address several finer policy issues, all of which will help us more successfully implement these tests, tests which are too important to mismanage given their impact on our students.

Keystone Exams – Rich Maraschiello

As a follow-up in terms of detail supporting the assertion by Amy that the field needs more time to prepare for student success on the Keystone Exams, I can share the following from firsthand knowledge.

- PDE has received anecdotal evidence from a variety of sources indicating that the Keystones Exams include more challenging content than the PSSAs.
- We have heard from some districts that their curriculum content does not fully match the content described in the Assessment Anchors and Eligible Content and that they are working to make enhancements.
- In addition, teachers and students who participated in field tests have shared that the rigor of the questions was high.
- Finally, with regard to anecdotal data, the teachers who sit on our Keystone item review committees have also commented on the increased rigor of the Keystones.

These statements do not surprise us, as we set out to create a more rigorous assessment by focusing on items that ask students to apply knowledge rather than simply recall facts.

In order to verify these assertions we asked our contractor, DRC, to conduct an analysis of item difficulty. We looked at all students' responses to the field test items matched to their performance on both grade 8 and grade 11 PSSA items. We compared Algebra I to PSSA Math; Literature to PSSA Reading; and Biology to PSSA Science.

We found that there are indeed many more Keystone items on the higher difficulty range of the scale in all three subjects especially Algebra I and Biology.

PA Value-Added Assessment System

At this time, I would like to move to our next topic, the public release of the Pennsylvania Value-Added Assessment System (PVAAS) data. PVAAS is essentially a statistical analysis of PSSA data. Access to the school by school PVAAS reports is from the PDE website's homepage.

Note on this slide, "the Pennsylvania Value-Added Assessment System (PVAAS) reports are now on-line and available to the public. The PVAAS reports provide indicators of the effectiveness of a district/LEA/school in making academic progress with students. The reports show a new way to look at existing data – an objective and more precise way to measure student progress and the value schools and districts add to students' educational

experiences. To see PVAAS reports, visit https://pvaas.sas.com. Achievement results (the Pennsylvania System of School Assessment, or PSSA) and growth results (PVAAS) should be used together to get a more complete picture of student learning. To view the achievement/PSSA results and Adequate Yearly Progress (AYP) of Pennsylvania's public districts/schools, vist http://paayp.emetric.net."

At this time I will ask Kristen Lewald to briefly walk us through the PVAAS website so you can appreciate what is now available to parents and community members.

PVAAS – Kristen Lewald

Good afternoon Senator Piccola, Senator Dinniman and members of the Senate Education Committee. Thank you for an opportunity to share information with you today regarding the Pennsylvania Value-Added Assessment System/PVAAS. As required by Act 104 of 2010, on February 23, 2011 the Pennsylvania Department of Education provided a public reporting site for the PVAAS data. Since that date there have been approximately 12,000 hits on the new PVAAS public website.

Before we talk about the specific reports on the public site I will differentiate between achievement and growth measures. Student achievement and student progress data are complementary but different types of academic measures. Student achievement data informs us about the final result of an academic experience. It is highly correlated with demographic factors, e.g., socioeconomic status and is affected by factors outside the school. Student progress data are not correlated with demographic factors. It is dependent on what happens as a result of schooling. This is the key concept underlying value-added

analysis and reporting. In summary, achievement data/PSSA tells us how students performed on a specific day. Growth data/PVAAS tells us what direction we are headed with students.

On the PVAAS reporting you will see high AND low achieving schools making HIGH growth with students - and you will see high and low achieving schools not making a year's worth of academic growth with students- because growth is about the effectiveness of our schools.

On the PVAAS public reporting site, viewers can access several types of information on public districts and schools across Pennsylvania for math and reading, grades 4-8 and 9-11.

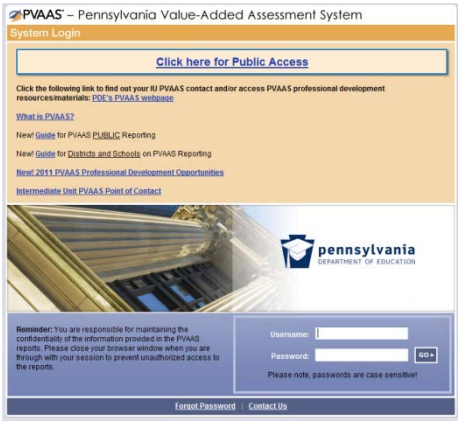
- The District and School Value Added Summary Reports which provide an indicator of the effectiveness of districts and schools in Pennsylvania in making academic progress with students.
- A School Search feature which allows users to find and compare the progress of public schools across Pennsylvania and search for similar schools based on grade levels tested, various school demographics, Intermediate Unit region, and/or county in which the school resides.

For today's testimony I will give you a visual look at the District and School Value-Added Summary Reports, but will focus most of our time on the School Search feature as

that is the feature where you can most easily compare the progress of public schools in Pennsylvania.

Accessing Public PVAAS Data

When users (district/school personnel or the public) go from the PDE website to the PVAAS website at https://pvaas.sas.com a link is provided for accessing the public PVAAS data. District/school personnel also have the option of accessing their password-protected site from this same login page to access additional data for their local decision-making.



District and School Value Added Summary Reports

The District and School Value Added Summary Reports provide an indicator of the effectiveness of public districts and schools in Pennsylvania in making academic progress with students. These reports answer the question:

- ✓ How effective was the district or school in impacting the academic progress of its students?

PVAAS District Reporting Grades 4-8

District Name		Average Gain over Grades (Reading, Grades 4-8) Relative to	
		Growth Standard	State
ABC School District	2010	1.7	0.3
	3-Yr-Avg	2.6	1.1
JKL School District	2010	-0.6	-2.0
	3-Yr-Avg	1.6	0.2
RST School District	2010	0.8	-0.7
	3-Yr-Avg	1.6	0.2
XYZ School District	2010	-0.3	-1.7
	3-Yr-Avg	0.3	-1.1

PVAAS School Reporting Grades 4-8

School Name		Average Gain over Grades (Reading, Grades 4-8) Relative to	
		Growth Standard	State
ABC School	2010	-3.0	-3.8
	3-Yr-Avg	1.6	0.8
JKL School	2010	0.5	-0.3
	3-Yr-Avg	0.4	-0.5
RST School	2010	0.1	-1.8
	3-Yr-Avg	2.1	0.2
XYZ School	2010	-1.7	-2.5
	3-Yr-Avg	1.9	1.1

PVAAS District Reporting Grades 9-11

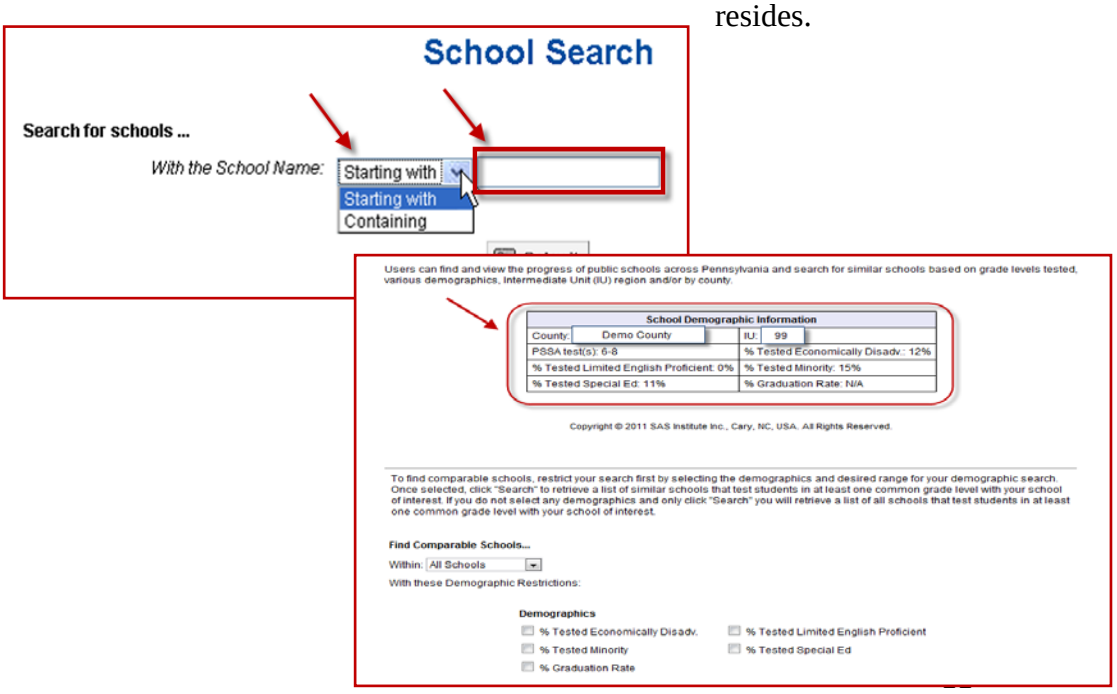
District Name		District Effect
ABC School District	2010	-27.9
JKL School District	2010	-37.2
RST School District	2010	57.9
XYZ School District	2010	65.6

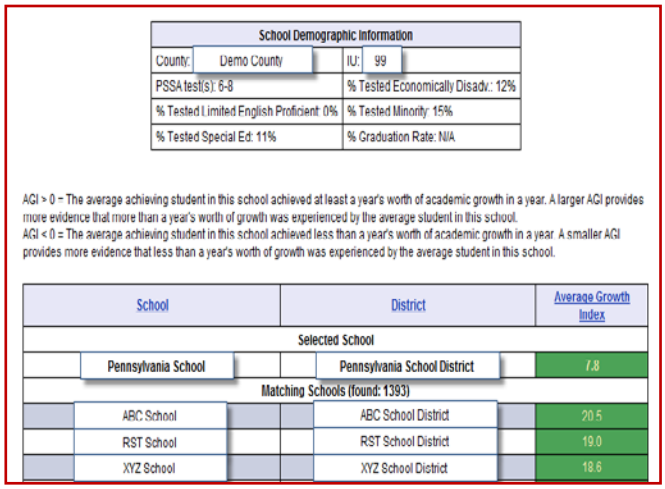
PVAAS School Reporting Grades 9-11

School Name		School Effect
Pennsylvania School	2010	63.9

School Search

The School Search feature allows users to find and compare the progress of public schools across Pennsylvania and search for similar schools based on grade levels tested, various school demographics, Intermediate Unit region, and/or county in which the school resides.





School Demographic Information	
County: Demo County	IU: 99
PSSA test(s): 6-8	% Tested Economically Disadv.: 12%
% Tested Limited English Proficient: 0%	% Tested Minority: 15%
% Tested Special Ed: 11%	% Graduation Rate: N/A

AGI > 0 = The average achieving student in this school achieved at least a year's worth of academic growth in a year. A larger AGI provides more evidence that more than a year's worth of growth was experienced by the average student in this school.
AGI < 0 = The average achieving student in this school achieved less than a year's worth of academic growth in a year. A smaller AGI provides more evidence that less than a year's worth of growth was experienced by the average student in this school.

School	District	Average Growth Index
Selected School		
Pennsylvania School	Pennsylvania School District	1.8
Matching Schools (found: 1393)		
ABC School	ABC School District	20.5
RST School	RST School District	19.0
XYZ School	XYZ School District	18.6

The School Search reports are very meaningful in terms of comparing schools in Pennsylvania based on growth. They provide two key pieces of information- a color code for report interpretation and a measure called the Average Growth Index. First, I will talk about the Average Growth Index. It is like the Consumer Price Index for growth. It is an index that is a measure of change over time- specifically growth. It is a robust statistical indicator that informs us about patterns of growth.

If the Average Growth Index is positive (greater than 0), this indicates that, on average, students in the school achieved a year's worth of academic growth in a year. A large, positive Average Growth Index provides more evidence that more than a year's worth of growth was experienced by the average student in the school. If the Average Growth Index is negative (less than 0), this indicates that, on average, students in the school achieved less than a year's worth of academic growth in a year. A large, negative Average Growth Index provides more evidence that less than a year's worth of growth was experienced by the average student in the school.

The color codes provide meaning for the numbers on the reports. Let's look at a school serving grades 4-8 as an example.

	Green (Favorable) – The school was effective in supporting students to achieve one year's worth of academic growth in a year.
	Yellow (Caution) – There was minimal evidence that the school was not effective in support students to achieve one year's worth of academic growth in a year.
	Rose (Concern) – There was moderate evidence that the school was not effective in support students to achieve one year's worth of academic growth in a year.
	Red (Strong Concern) – There was significant evidence that the school was not effective in support students to achieve one year's worth of academic growth in a year.

The three levels below the Favorable indicator (Yellow, Rose, and Red) may be compared to a medical analogy:

- The Yellow, or Caution, indicator is comparable to taking your temperature and recording a 99.5°F. It is unlikely that you would go to the emergency room with that temperature but you might check your temperature later or the next day.
- The Rose, or Concern, indicator indicates more moderate evidence comparable to a temperature of approximately 100.6°F. This temperature would suggest perhaps a call to the doctor's office.
- The Red, or Strong Concern, indicator requires immediate attention, comparable to a temperature of perhaps 102.4°F. This temperature provides significant confidence that the patient needs immediate attention.

In summary, PVAAS is providing growth data to assist Pennsylvania to make data-informed decisions to raise student achievement, close achievement gaps, decrease student dropouts, and increase college readiness.

Questions about PVAAS can be directed to the PVAAS Statewide Team for PDE at pdepvaas@iu13.org or (717) 606-1911

Four-Year Cohort Graduation Rate

Like PVAAS data, the Department has recently made public all district, charter and cyber charter high schools' four-year cohort graduation rates. The "cohort" calculation method generates a different rate than the "leaver rate calculation" currently in use. The cohort calculation is almost always a lower percentage of graduates based on a different calculation methodology. It is important for stakeholders to understand, and to be able to communicate, why the publicly-reported numbers may look different even though there is no fundamental or underlying change in a school's circumstances. The difference is the result of the method used to calculate the rate.

The new methodology provides a more uniform and precise measure of the high school graduation rate – one which can then be used for comparison with other states. **Accurate data from the LEA and charter schools is key to successful implementation.** The methodology will improve our understanding of the characteristics of the students who do not earn regular high school diplomas, or who take longer than four years to graduate.

In 2005 all 50 governors across the country made a commitment to voluntarily implement a common formula for calculating their state's high school graduation rate by signing the National Governors Association (NGA) Graduation Counts Compact. The Compact contained four commitments:

1. To use a common, four-year adjusted cohort graduation rate formula;

2. To build state data collection and reporting capacity;

3. To develop additional student outcome indicators; and

4. To report annually on their progress toward meeting these commitments.

The NGA cohort graduation rate is the number of students who graduate in a given year with a regular diploma divided by the number of high school students who entered four years earlier with adjustment each year for students who transfer in and out.

4-Year Cohort Graduation Rate:
(Number of on-time graduates in 2010) / [(Number of first-time entering 9th grade students in 2006) + (Number of transfers to the class of 2010) – (# of transfers out of the class of 2010)] x 100

In December 2008, the USDE issued regulations and guidelines to implement a high school graduation rate calculation that is very similar to the NGA cohort rate that all states had already committed to report with the class of 2010. However, the new regulations included additional requirements:

a. States use the cohort graduation calculation for accountability purposes in August 2012.

b. Graduation rates to be disaggregated to ensure accountability for each NCLB subgroup (special education students, English language learners, economically disadvantaged students, and racial subgroups).

c. States only count students who graduate in *four* years in the 4-year cohort graduation rate, and to give more weight in their accountability system to the 4-year graduation rate.

This means that "[a] student who graduates in more than four years is counted as a non-graduate in the four-year graduation rate"1 and will not be included in the numerator of the four-year graduation rate.

2010 is the first year we have the four years of data necessary to determine each school's rate. Next year we will be able to report both a four-year and five-year rate, and the following year, we will be able to report a six-year rate as well. Of course, we hope almost all students will graduate in four years, but we would rather be able to provide additional years of schooling for a student to achieve graduation requirements, than not have that student graduate at all. While some schools are appropriately concerned about their graduation rate, the education of the student should not be sacrificed to accommodate a statistical goal.

As you can see from the testimony provided today, educators and students are being held accountable for three significant and distinct measures:

1. achieving rigorous course content as measured by the Keystone Exams,
2. growing in achievement as measured by the PSSA and reported using the PA Value-Added Assessment System regardless of where a student begins on a performance continuum, and
3. graduating on time, that is within four years of beginning ninth grade, as measured and reported using the 4-year cohort graduation rate.

Most K-12 teachers and administrators have repeatedly indicated they embrace accountability when the measures are fair and accurately reported. My colleagues who

are with me today, including Rich Maraschiello, Kristen Lewald, Jennifer Waltz from the PA Department of Education, Adam Schott who serves as executive director for the State Board, and Dr. Carolyn Dumaresq, Deputy Secretary for Elementary and Secondary Education, will continue to work vigorously toward that end on these and any other measures associated with providing parents and taxpayers with a thorough understanding of how the public schools in their communities are performing.

Thank you.