From: Herb Bassett

To: Dr. Gary Jones, BESE President
Dr. Holly Boffy, BESE Vice-President
Mr. John White, State Superintendent
cc to all BESE members

Date: April 3, 2017

Dr. Jones, Dr. Boffy, and Mr. White,

This communication is a follow-up to the public comments I made regarding the ESSA submission at the Special BESE meeting on March 29, 2017. I am breaking this into two parts.

In the first part I will explain serious technical problems with the K-8 growth index that appear to have gone unnoticed. The flaws could cause the scores to mislead parents in choosing schools for their children, unfairly affect schools of different grade level configurations, and simply be invalid.

Since Dr. Boffy's motion attaches a letter-grade equivalent to the growth index, it is urgent that the problems be addressed before the ESSA submission is made. Solving them is germane to her motion.

In the second part, I ask for you to clarify certain details pertaining to Dr. Boffy's motion.

I. Problems with the K-8 growth index proposal.

The hybrid model, model F, was chosen for the K-8 growth index. This model first asks if a student is on track to Mastery by the eighth grade. If so, the school receives a 150 for that student. If not, then the student's VAM percentile rank is used to assign a score using the following table:

Percentile	Index Points
0-20th	0
21st-40th	25
41st-60th	85
61st-80th	115
81st-99th	150

Materials provided at the Jan. 7 Accountability Commission meeting (slide 44) show that 41 percent of students were on track to Mastery in 2016. Thus, "on track to Mastery" produces roughly twice as many awards of 150 points as the VAM percentile ranges. It is advantageous for a school to earn points through the "on track to Mastery" step.

However, **the method for determining "on track to Mastery" gives significant advantage to 4th grade over 8th grade.** Slide 43 shows that the formula simply takes the number of points below 750 (Mastery) on the prior year score and divides it by the number of years to the 8th grade to set the required progress. Thus a fourth grader only has to progress one fifth of the way to Mastery, while an eighth grade student has to actually score Mastery to earn the growth points.

To put it another way, consider five students in grades 4 through 8 who each had a prior year score of 700. The required growth to earn index points is:

Fourth grader	10
Fifth grader	12.5
Sixth grader	16.7
Seventh grader	25
Eighth grader	50

Clearly, more fourth graders will meet their targets than seventh or eighth graders. This would not be a fatal problem in evaluating a <u>district</u>, but <u>schools</u> have different grade configurations. An elementary school with grades K-5 obviously has an advantage over a junior high with grades 7-8. The growth letter grades would not provide an apples-to-apples comparison.

Even a K-8 school and a middle school with grades 6-8 would not be on a level playing field. It is entirely possible that a middle school could have higher VAM scores than a K-8 school but have a lower growth index because of unfair scoring system. **Then a parent choosing a school** for her 6th grader **could be mislead by the growth index score**. The middle school - with the higher VAM scores - would actually be the better choice, but the K-8 school's higher growth score could cause the parent to choose it instead.

I ask that the department run the data to determine what percentage of eligible fourth graders are "on track to Mastery", what percentage of eligible fifth graders are "on track to Mastery, and likewise for grades 6, 7, and 8 so that the problem can be exposed and quantified.

A similar problem also exists for students who in the prior year were at Mastery and must show that they are "on track to Advanced" to earn the points in step one.

All of the above assumes that you deem the growth to Mastery measurement to be valid. However, **the growth to Mastery measure is invalid** because it compares scaled scores across grades. The [LEAP/iLEAP ELA/Math interpretive guide](#) (p.5) cautions against this:

> **Limitations**
>
> *Scaled scores are only comparable within a grade and content area across years. They cannot be compared across grades or content areas because they do not represent the same level of performance.*

While I do not endorse the Value-Added Model, it appears to be the only viable option at this point. It could provide clarity if the results were reported alone and with measures of confidence.

II. Regarding Items in Dr. Boffy's motion:

Item 3 specifies that the thresholds for A, B, and C in 2018 should start lower than they will end in 2025.

1. *Please clarify: Will the thresholds for D and F start lower as well? They were not explicitly mentioned.*
2. *Please clarify: Item 1 calls for basic on the LEAP and certain other measures to earn "C" level*

points rather than "D" level points. Is that "C" level to be based on the lower 2018 thresholds or the higher 2025 level thresholds?

Item 2 specifies that there will be no curve or forced letter grades starting in 2018.

1. *Will the initial thresholds of A, B, C (and D, F) be set to match the projected distribution presented in the Jan. 2017 Accountability Commission powerpoint based on the 2016 data? Essentially I am asking if the starting grading scale will be set to achieve a similar grade distribution to our recent history, or is it anticipated that there will be a wholesale letter grade distribution change at this point.*
2. *If so, what accommodations will be made or what revision process will be implemented to adjust for the shift in achievement level distribution that likely will accompany the transition to computer-based tests from paper-and-pencil based tests this year (for K-8 students)?*
3. *What relative impacts on the year-to-year grade distributions in K-8, High Schools, and Combination Schools do you anticipate if the same 2018 grading scale is set for both K-8 Schools and High Schools?*

Also, *I request to be informed of the department's findings of the percentages of eligible students who are on track to Mastery separated by grade level: fourth grade, fifth grade, sixth grade, seventh grade, eighth grade.*

Finally, slide 42 of the Jan. 7 Accountability Commission powerpoint presentation contains a table showing average growth index based solely on the Value-Added Model. The values are sorted by the 2016 (ending year) letter grade rather than the 2015 (starting year) letter grade. You will find that if the data is sorted by the 2015 letter grade that the average values for the A schools and the F schools will come closer to to values for the B, C and D schools, all of which will be very close to 75.

Sorting by ending year - as was done in the table - creates a systematic skewing of the data. The "A" category excludes schools that started with an "A" in 2015 but whose students performed poorly, so the school dropped to a "B" in 2016. And, the "A" category does include schools that started with a "B" in 2015 but whose students performed especially well raising the school to an "A" in 2016. By systematically including high scores and excluding low scores the average registers higher than it should. This creates a false impression of the student growth performance of "A" schools.

Likewise, there is a reciprocal effect on the F schools.

This unfortunate method of sorting growth data by ending year was also used by the department in computing SPS growth target recommendations for principals this past year. Many were wildly unrealistic. It is important that the sorting be done by the starting year because principals will set their targets based on where they start - not end - the growth cycle.

I urge you to instruct your data team to review its methods for reporting growth measures.

Thank you in advance for your prompt reply to my questions above. If I can be of assistance, please let me know.

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