



The **BEACON**

News from The Coalition for Excellence in Science and Math Education

Volume XVIII, No. 1 Queries? email M. Kim Johnson (next page) Copyright © Jan 2015

In this issue: Editor's Message – Kim Johnson. – Special reprint of letter that went viral on NM teachers – Part 1 of the Beacon version of the briefing on NM educational performance and new teacher evaluation protocol (growth based portion) given to the Legislative Education Study Committee and the Legislative Finance Committee Joint Meeting in August 2014 – Announcement of guest speaker - Michael Shermer for February 21, 2015

EDITOR's MESSAGE

IS THE CURE FOR EDUCATION ILLS WORSE THAN THE PROBLEM?

New Mexico has, like the rest of the country, been subjected to a significant set of education “reforms”. These reforms have been initiated and carried out in a non-partisan manner by the federal government and our own state Public Education Department (PED).

These reform efforts began for New Mexico in 2011. The major parts include a way to evaluate schools, changing the way teachers and principals are evaluated, and making 3rd graders who do not measure as proficient in reading to be held back to repeat the 3rd grade the following year. So far, the last item has not been implemented. However, the first two have, and there are consequences that can already be seen from these two items. In fact, the results require the creation of a number of different and new changes to educational procedures in the state.

The questions we ask are: have these reforms caused any actual positive improvement in student performance, and if the answer to that question is a yes or no, just what impact have these changes made and what is a reasonably projected outcome if they continue? **It is important to note that we have asked these questions without preconceived notions as to what the answers may be.**

There are other questions that could be asked and elements of these reforms that are not addressed because of the effort required, lack of good data, and priorities set when we began this analysis.

We will start with a letter from a new member, Jessica McCord, that expresses some of the problems as seen by a teacher. This excellent letter was published on the web and, though it went “viral,” it was probably not seen by the average reader of this newsletter. But this letter does set a tone, asking many of the questions we see that have context in terms of our analyses.

Next, we will present the key data and analysis points from a summary briefing that CESE presented to a combined meeting of the New Mexico Legislative Education Study Committee and the Legislative Finance Committee on August 27, 2014. We believe the data presented in this briefing should serve as a reason to rethink the direction that the school reforms are going, at least for New Mexico which does not always respond the way other states do to the same situations.

The briefing appeared to be well received. Undoubtedly, there were some of the committee members who were not impressed, but nevertheless, data do tell a story if one listens to it. We hope that we can present these findings in a manner that does not require a PhD in either education or mathematics to easily interpret. We do realize that most people are not educators and mathematicians yet are constantly bombarded by numbers and graphs, so we took quite a bit of time to try and aim this analysis toward the normal person (a little tongue in cheek, there). We do hope this has been successful, but do welcome questions. My email address is on the next page if you have any.

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Letter from a Teacher to the Newly (2014) Elected Leaders of New Mexico

Editor's note: The following letter was written and published on the web shortly after the November 2014 elections. It was written primarily to the Governor but applies to all newly elected officials in New Mexico. The writer, Jessica McCord, recently joined CESE, and we welcome her with a reprint of this letter with her permission and the permission of the Los Alamos Daily Post where it first appeared. Here is a short biography and picture so you will know to congratulate her if you ever run into her while out and about. (Note that even though this is primarily written to Governor Martinez, it is definitely not partisan, but rather issue-oriented.)



Jessica McCord is an educational consultant with Keystone Assessment, LLC, and a dual certified teacher holding licenses in both special and general education. At Keystone, she works with states, districts, and schools to support quality instruction and assessment for all students, but especially those with complex instructional needs. She has worked with pre-service teachers in elementary education, dual-license, and alternative licensure at the University of New Mexico. She taught in the Rio Rancho Public Schools for 8 years where she worked as both a general and special educator in various roles. In 2013, Jessica completed her PhD in Special Education with a focus in literacy, with her dissertation focused on the relationship between educational leadership and life in schools. She believes in the power of informed and engaged citizens, educators, students, and policy makers to collaborate and create positive change in education and the work she does is guided by this belief.

Congratulations on your re-election. I have a great respect for our democratic process, but have had to sincerely reflect on my thoughts after this latest election. As a concerned citizen and an educator, I have to take responsibility for communicating with my elected officials and believe that my voice can make a difference.

I have been an educator in NM for 10 years, I have worked within all levels of the system from my own classroom, all the way into higher education, and even community agencies for adults with disabilities. I also work with other states as a consultant to help evaluate their systems to improve practices for ALL students, but especially students with special needs. I, like you, have a family member with a disability. He has been a major inspiration for me to work to create positive change in our system as a whole. My life's mission is to help ensure a high quality, equitable education for students, regardless of any label placed on them (disability, socioeconomic status, etc.)

While I recognize that there are issues with teacher preparation, evaluation, and accountability and I agree that we have to have better mechanisms in place to ensure that excellent teachers are in every classroom, I can assure you that your policies are causing quite the opposite to unfold. You are pushing excellent teachers and leaders out of the profession, both in special and general education. The kind of teaching you are encouraging with this overemphasis on standardized tests and the related teacher evaluation systems are encouraging teachers who can open a book, read from a teacher's guide, and expect all students to fit into a predetermined box that only has one right answer.

There is no study anywhere that has validated that these measures are what it takes to be college and career ready or improve our economy, leading to better lives for the students who are subject to them.

You are pushing students with disabilities back into segregated settings because general education teachers are scared of what "those" kids will do to their test scores. It is, in many ways, encouraging a shift back toward 1950's type institutionalization because teachers are far more concerned about test scores than honoring the rights of our children to be educated alongside their grade level peers. Teachers don't have the time or energy it takes for the kinds of collaboration and planning it takes to do their jobs well and meet the needs of the diverse students in our schools.

ALL kids deserve an excellent education with knowledgeable, dedicated teachers who are committed to each student's individual growth and learning, but this testing regime is harming excellent instructional practices for all. Teachers are worried about test prep instead of getting to know their students and being on top of the latest developments in best practices.

Your policies encourage teaching that could be carried out by any person pulled in off the street at random. There is both an art and a science to good teaching. Are there problems? YES! Is the answer standardized testing and value added statistical modeling that even the most brilliant scientists in my hometown cannot understand? NO!

We need accountability but by forging ahead with your misguided reforms, you are making the chances slim that we can find innovative, effective ways to evaluate teaching and learning in our state. The stress caused is just pushing brilliant people away and often reward-

ing or misrepresenting those who should not be in the classroom at all.

I beg you to rethink your education policies. For the diverse kids we have in our state, including kids like your sister and my uncle, who deserve to be educated alongside their peers, held to high expectations, and taught by passionate educators who are invested in teaching and learning and willing to be held accountable when it has REAL meaning to them and their students ... not to satisfy numbers to post on the PED website and punishments, scripted curriculum programs, and more testing to be shoved down their throats.

I have never felt like crying when I watched a governor's race, and tonight I was nearly brought to tears. NM citizens, by and large, do not understand what is happening to our education system because it is so large and complex that it takes years of study to even begin to understand the inner workings and complex pieces that it consists of. All people know is that there are problems, and I couldn't agree more. Disenfranchising all teachers because of systemic problems and adopting complicated reforms based on complex mathematical quantifications that reduce the real live human children we work with to a data point on a graph, is not the answer.

We need excellent professionals in our schools, and there are so many who feel the same way I do and see the dire need for change. We want to work for the same end goals you speak of, but we are in the field every day and we know that what you are doing has terrible unintended consequences that are going to damage our system beyond repair for years to come ... beyond your tenure. Please don't let your legacy be a stubborn resolve to follow through with things that have consequences that are not fully understood.

Listen to the real educators in your state (and nation) and work with us to make improvements. For the sake of real children; not politics, not money, not for the sake of "standing your ground with reform". True leaders work with their people to make change. Memorable leaders listen when the citizens don't trust the state department leadership in place to guide education in their state and make decisions that will impact the students who have no say in what is imposed upon them.

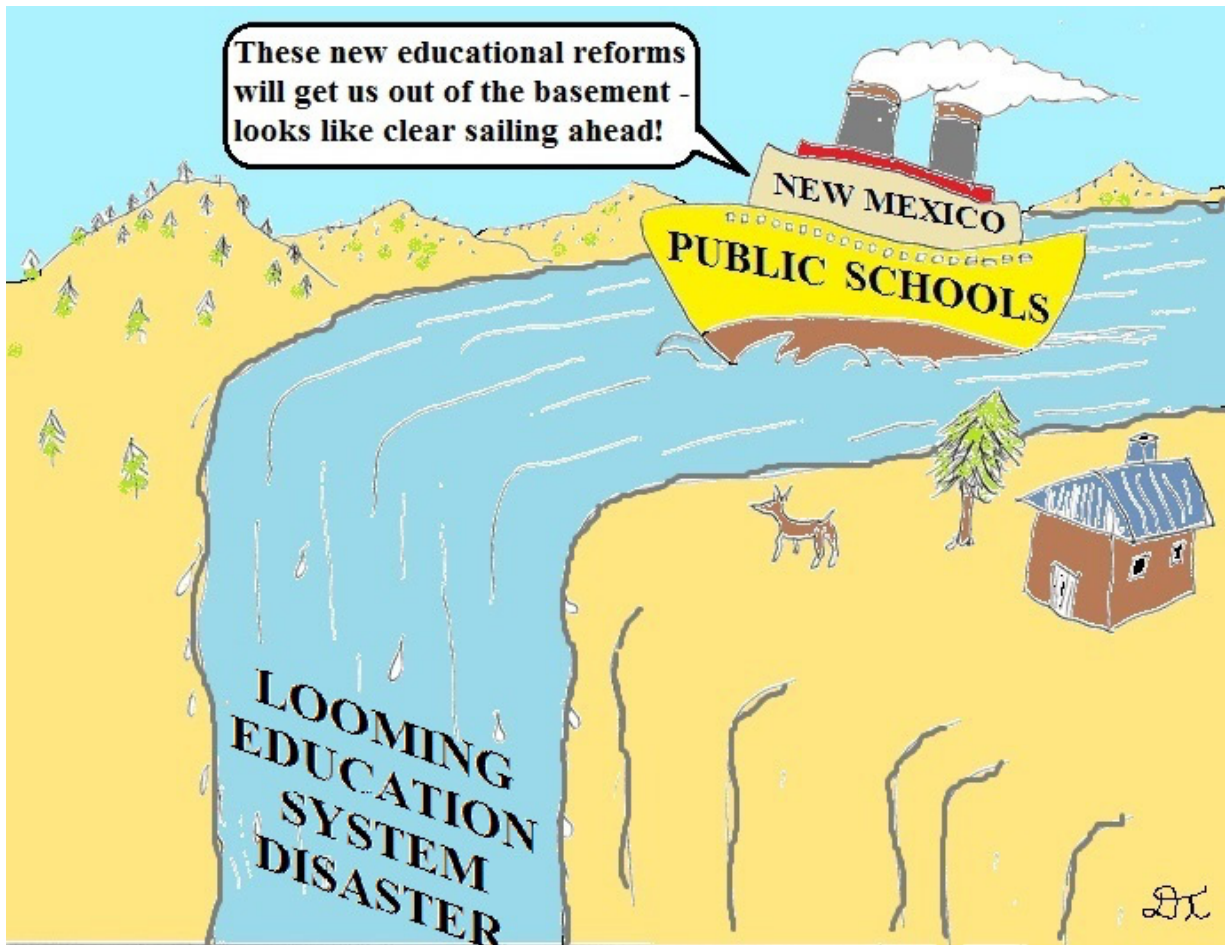
Our children trust us to care enough about their future to be competent, thoughtful, and knowledgeable about the choices made that impact how they spend 185

Continued from page 3

days of their valuable lives each year. Please be the leader that listens and reads between the lines of the election results. Four more years of what you are doing will leave our system in shambles. Please be a pioneer in education and help New Mexico rise away from the bottom of a few national lists instead of following in other state's unstable footsteps (Florida). I ask you to look at your 58 percent from a humble view that sees 42 percent as an admirable goal for improvement.

You have staunchly supported accountability in our schools and teachers would not "pass the test" with 58 percent so I challenge you to think about your own job in the same way you are rating teachers. Let's all improve, together. Many educators already have their sleeves rolled up ready to work toward meaningful change. Rethink your reforms and leadership choices and let's get it done together.

Sincerely,
Dr. Jessica McCord



Supporting Data and Analyses

The requests in the above letter in which different kinds of changes that are occurring in New Mexico's educational structuring are not based on a whim. Dr. McCord certainly had not performed a deep analysis before writing the letter, but was able to see the problems in front of her. And these problems are not just temporary glitches, as they say, when a whole new set of changes comes about, but rather they undermine the very foundation of education. Does something need to be done to pull New Mexico and much of the nation

onto a much higher footing to achieve significantly better educational results? The answer is an overwhelmingly "of course!" After extensive analysis, we believe that is exactly what our state and national leaders (all parties) are NOT doing. So we present analyses supporting this contention, much as they were presented to a joint meeting, by invitation, to the Legislative Education Study Committee and the Legislative Finance Committee (standing legislative committees for the state legislature) on August 27, 2014.

WHERE IS NEW MEXICO NOW IN TERMS OF PERFORMANCE?

Introduction

We realize that much of our data comes from the results of New Mexico's Standardized Test from the past. We contend that this is sufficient to show where problems are in the educational reforms that have been implemented over the last 4 years. We also contend that these results can show us a path to improvement. However, we will also demonstrate that there is logical and analytical information that clearly demonstrates the inappropriateness of using results from standardized testing or pseudo-standardized testing for grading schools as the NM Public Education Department (PED) now does or, perhaps most importantly, evaluating teachers by using these data. There are better ways that have been pioneered and modified over many years that actually work for evaluations of professionals – teachers who apply their skills to their profession as do other professionals to theirs. The following elaborates on the introduction from page 1.

New Mexico's Performance Since 2007 Using Results from the NM Stan-

Be warned that, as former Territorial Governor, Lew Wallace, once stated: "All calculations based on experience elsewhere, fail in New Mexico." This observation is key to one of the errors many people in positions of educational leadership simply do not understand. In that vein, the following analyses presented will often not apply outside of New Mexico. And conversely, many things performed in other states or countries often have little, if any, application to New Mexico education. One must always be on the alert for misapplications of other's experiences to New Mexico. This can hardly be over-emphasized. What may have worked in Florida or Finland or Singapore, has a very good chance of not working here as far as improvement of New Mexico's education system.

We, therefore, stay very close to New Mexico data to make our analyses. And we start by looking at the only hard data we have—New Mexico Standards Based Assessment Test (NMSBA) data using the most simple measures available, and that is **scale scores**. Scale scores are the outputs of the actual students' scores from the NMSBA tests. They are not a one-to-one rep-

resentation of each answer, but rather are "scaled" such that different questions or groups of questions weightings are adjusted to reflect the relative importance of the question(s) and also changes in a test from one year to the next. For example, each year the NMSBA replaces 25% of its questions to mitigate the effects of students passing questions on to the next year's test takers. But the changed test may not be quite equal, so they are equated or normalized to the same scale. This very nearly makes the tests the same difficulty covering the same topic areas each year with the same emphasis. That is, if there were 200 questions on a test, last year's test may have been equivalent to a 195 raw score and is adjusted accordingly. With the NMSBA, the tests are scaled to 0 to 80 points, with 40 being considered *proficient*.

So let's look at how New Mexico has performed since scale scores were made available in 2007 (figure 1). This allows us to see the differences between different reform approaches, as well. It also demonstrates the difference in smoothing effect using proficiency versus scale score.

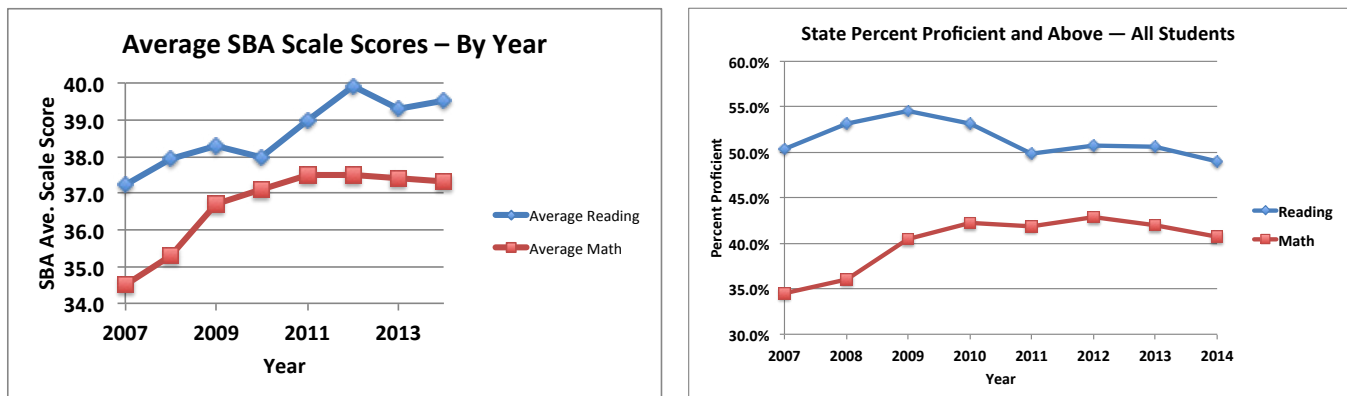


Figure 1. Comparison of New Mexico Standards Based Assessment results looking at scale scores on the left and percent proficient on the right (i.e., percent of students scoring at a scale score of 40 or greater).

Continued from page 5

Figure 1 on the previous page shows this smoothing effect, but more importantly, it shows that New Mexico was generally increasing in performance until 2011/2012 with the exception of the average reading scale score. This does not show up on the proficiency graphs, probably because of the general smoothing effect. After 2011, reading and math are relatively flat with some variation in reading that may simply be noise. Also note that the addition of Common Core standards in 2013/2014, though tested with the NMS-BA, appeared to have no negative impact that was not already being observed.

We have insufficient information to calculate what the actual noise or error would be for any of these scores for any year. However, these data are almost certainly representative of the actual trending of student performance.

Figure 2 shows New Mexico's performance on the National Assessment of Educational Progress (NAEP) test that is given every odd numbered year. This test is the most thorough and reflective assessment of actual student performance that is given in the nation. It does not test every student, but divides specific topic matter among several different groups of students in each state based on criteria that reflect the state's population demographics. NAEP is very thorough and is considered as "the Nation's Gold Standard" for broad based standardized tests.

Except for 4th grade reading, the trend for New Mexico has been fairly smooth, following the nation, but scor-

ing lower than the average, up until 2011. The 2013 scores either stayed about level or decreased. This may be caused by simple variation within error bounds, but again we do not have enough data to verify this.

If the trends for New Mexico are within error bounds, then it is not really possible to absolutely say why the scores would level off or trend downward based on the results of only two years worth of test results. However, we can think of several possible causes, but without the hard data to back them up, we choose not to speculate.

Finally, we take a quick look at graduation rates (Figure 3, next page). We fully recognize that graduation rates can be determined in a number of different ways. The New Mexico PED has chosen a specific method that accounts for multi-year rates (e.g., if someone takes 5 or 6 years to graduate instead of the standard 4 years), plus several other items like mobility of students changing schools, and so forth. However, reporting from other education groups, such as *Education Week*, generally uses different methods including, in one case, simply counting diplomas sent out at the end of the senior year, regardless of other factors that should be included. When we use the New Mexico method (no data are yet available for 2014), we see that contrary to media reports and political ads, there has been no substantive change in graduation rates since flattening out after 2012. We draw no specific conclusion from this, except that one should always be careful about accepting statements that are "common knowledge," especially when the topic is education.

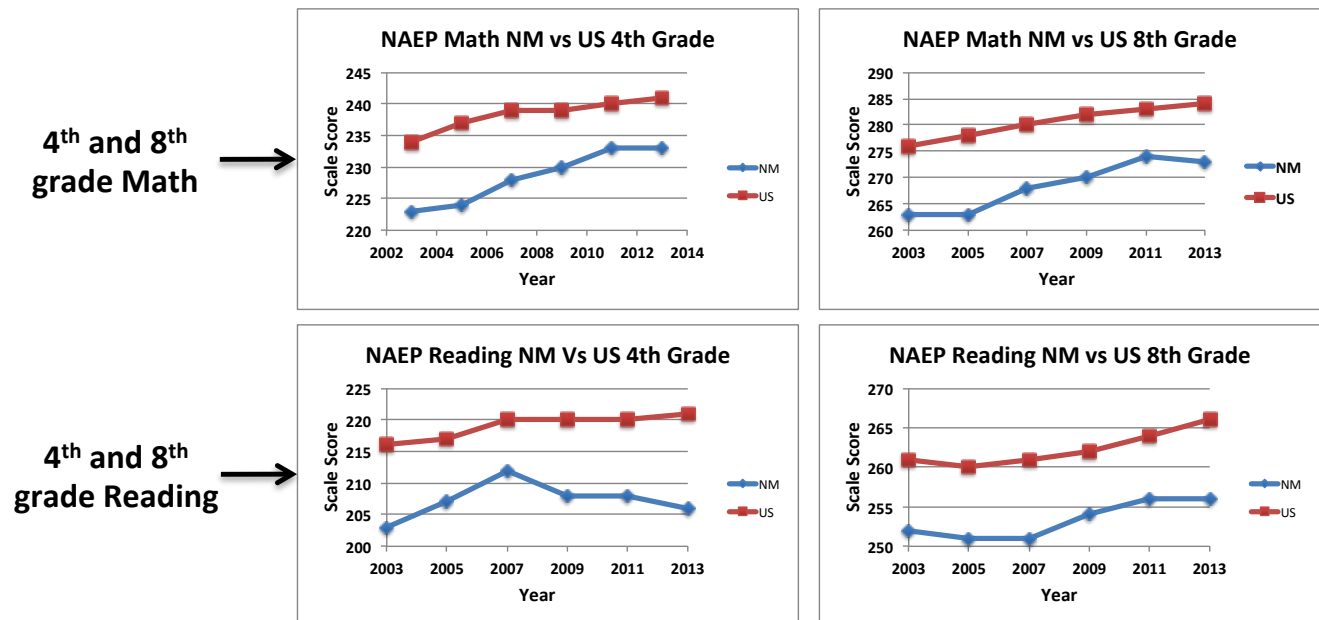


Figure 2. Comparisons of New Mexico and US NAEP scores for 2003 through 2013. The next NAEP test will be in 2015.

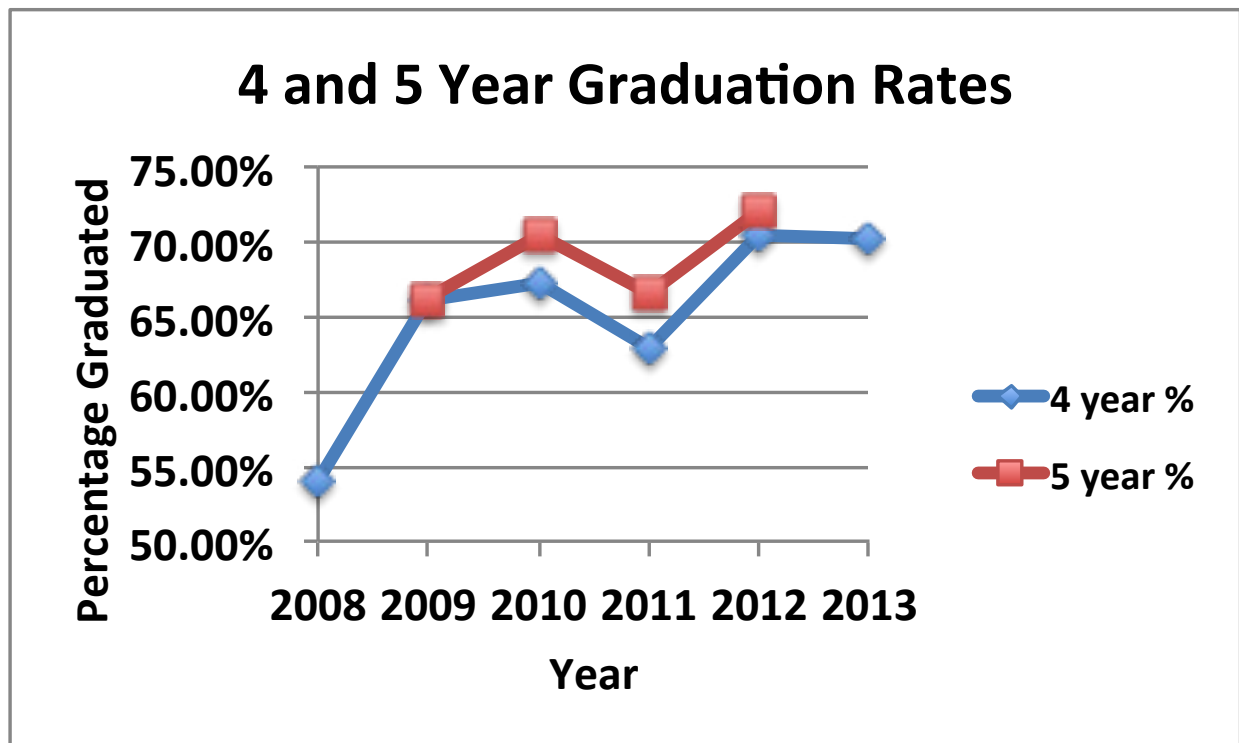


Figure 3. Graduation rates for New Mexico from 2008 to 2013 (4 year) and 2008 to 2012 (5 year) showing a leveling out from 2012 to 2013 for 4 year rates.

SCHOOL AND TEACHER GRADING

Background: We have taken a brief look at how students have been performing over the last seven years, which of course includes the last four years. There have been two major changes during the last four years and those include the grading of schools (the New Mexico ABCDF Act) and starting last year, the evaluation of teachers with 50% of the evaluation composed of “student growth” as compared to the previous two years. Anyone who has dealt with large systems should realize that change to those systems may take some time to manifest, simply because of the associated momentum. However, rarely are there such dominating changes as the school grading and teachers using student growth as the largest, single piece of their evaluation. These are specific items we can look at and actually analyze regarding potential impact. After looking at these changes, we believe that they are causing significant impact, not all good, and not all by the simple whims of our educational leadership in Santa Fe. In fact, both of these things are, to a large degree, a requirement by the US Education Department.

In 2003, a law was passed—No Child Left Behind (NCLB)— that required students to improve such that by the year 2014, all students would be functioning at the “proficient” or above level in reading and math, where proficient is substantively the same as a “C” grade. This statute was a reauthorized version of the Elementary and Secondary Education Act (ESEA) from 1965 – a part of the War on Poverty that had been reauthorized every five years since its inception. The act requires high poverty students and schools, specifically Title I schools, to be more productive. It is supposed to be reauthorized every five years, wherein it is changed to meet new needs and changing conditions. But that has not been done since 2003, even when it was recognized that the key specific goal of the NCLB reauthorization was impossible to meet. Yet the law is still active, and a significant amount of money is tied to the requirements of the act. In addition, there are rules about how the money is used and what happens to schools that do not reach their Annual Yearly Progress (AYP) (culminating with 100% proficiency by 2014) that significantly impact how the federal money allocated is actually used and specifically what happens to schools that do not achieve their AYPs.

So we have a conundrum. We need the money and control over most of it, but we cannot meet the statutory requirements that go along with the law. Fortunately, someone had enough foresight to allow the executive branch of the US government to make allowances for just such a situation, and the President, through the US Education

Department has done so in the form of “waivers” that allow different approaches to measuring progress and goals set. Additionally, the New Mexico Executive Branch, under which education policies are determined and carried out, agrees with the basic requirements of the waivers and has obtained one for New Mexico. We still have to meet Annual Measurable Objectives (AMO) as the federal government calls them (e.g., 85% proficient in reading by 2022, with somewhat different requirements for math, at least in the original waiver). These are called Student Growth Targets –SGTs – in the New Mexico waiver.)

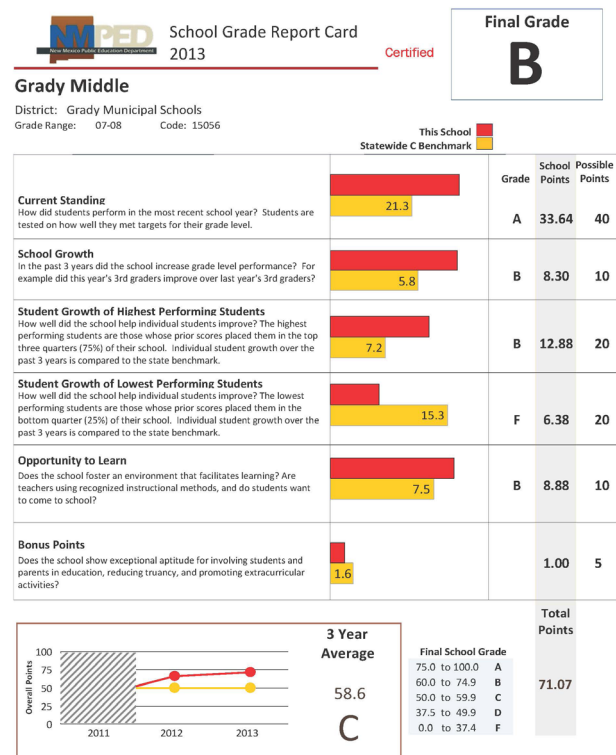
So where does New Mexico stand today? The **waiver** has been accepted by the US Education Department. New Mexico now has a school grading system in effect and teachers have a new way of annual evaluation in which 50% of that evaluation is composed of a measurement of the growth of their students compared to the last two years. Let us look at the details of these two very important supposed measures of performance and do some analysis of their effectiveness.

School Grading

The New Mexico legislature passed a law called the “ABCDEF ACT (short name) that authorized schools to be graded based on several criteria that we will discuss in a moment. The implementation of this act was left to the PED, and the first results were provided in 2011. The grading was based on the criteria shown in the sample in the next column (do not worry about readability. It will be discussed in the text.) Each element graded was specified in the act, but the specific weighting of the elements and assignment of grades were left to the PED to determine. Unfortunately, there are some problems with this grading scheme.

Note the first column in the example grade sheet. These are the criteria that are measured or determined by tests or subjective criteria. The first element is “Current Standing.” This is simply the average proficiency for math and reading as adjusted by a value added model (VAM) that accounts for specific school characteristics (more in a moment on the VAM usage). “School Growth,” the second characteristic, is a measure of how much the school has increased its proficiency level from the average of last two years. “Student Growth of the Highest Performing Students” is the growth in *scale score* points over the last two years as adjusted by the VAM for the highest 75% of the students. “Student Growth of the Lowest Performing Students” is the same thing for the lowest 25% of the students for this school year. “Opportunity to Learn” is a combination subjective/objective evaluation that supposedly measures what its title states – opportunity to learn. Finally, Bonus points are assigned based on a specific rubric that attempts to measure several things including truancy, involvement of parents in the education process, etc. These last two items have very small correlation to the schools’ average scale scores. (Note that this grade sheet is for elementary and middle schools. The high school grade sheet adds another criterion called “College and Career Readiness,” again, an assessment of student participation in SAT tests, etc., and “Graduation” which includes 4, 5, and 6 year graduation cohort rates for the high school.

We must ask several questions of these elements: What



School Grading 2013

Example of 1st page of grading sheets.

do these really mean?; are these really meaningful with respect to a school's overall performance?; what does the VAM accomplish?; is the measurement of “Growth” really meaningful?; why are these criteria weighted as they are (last column of the figure)?; and is there anything in these criteria that show a school **how to get better**? There are additional questions, but these certainly are sufficient to characterize the usefulness of these grades in general. We submit they are only moderately useful as they stand. Specifically: the VAM used to adjust the Current Standing and the Growth criteria uses School size, mobility (FAY or full academic year) and the school's prior score. In fact, school size has no significant correlation to test performance, mobility has very little correlation, and past performance, though a good predictor of future performance,

tells one nothing about why a school's students are performing as they are **this year**. It is not at all clear that the VAM adjustments are accounting for any real value added or value subtracted. The past performance may indicate something about the school's demographics, but it does not always do so. Basically, we do not see the use of the VAM created for this report card as doing anything other than potentially trying to adjust schools' scores in these criteria so that they can be scored within the parameters calculated to grade schools on a curve. And the only one that would correlate with **any** significance is, the prior score, just as yesterday's weather generally correlates with today's weather. **No new, meaningful information is added.** To illustrate two of these points, figures 4 and 6 (page 10, where the graphic is used for other reasons, too) show how school size and FAY offer either no or very little correlation to test scores. (FAY correlation to performance in figure 6 is a part of the small, red slice in the lower left of the pie chart.)

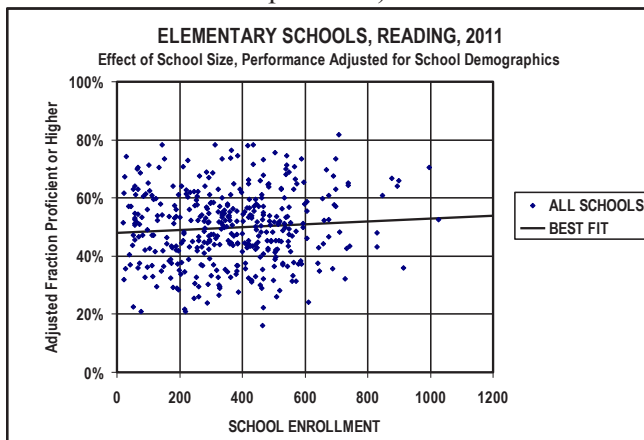


Figure 4. School size has essentially zero correlation to schools' test scores.

Now let us examine the use of Growth as a grading criteria. Growth in various forms accounts for 50% of the school's score. Yet growth is chaotic. (See figure 4, above.) In fact, it is so chaotic from year-to-year that we do not believe it is a very useful measure for the average school's performance when observed over the two years (the grade sheet says three years) that it is used. Additionally, when large numbers of schools are used, we find that there is some small, but valid trend toward scoring those schools with the least advantaged demographics at a higher value than schools with a more favorable demographic. So it is chaotic and unfair to some degree. Why use it? Probably because no one ever looked at these data for New Mexico.

Another problem with growth is in using the low-

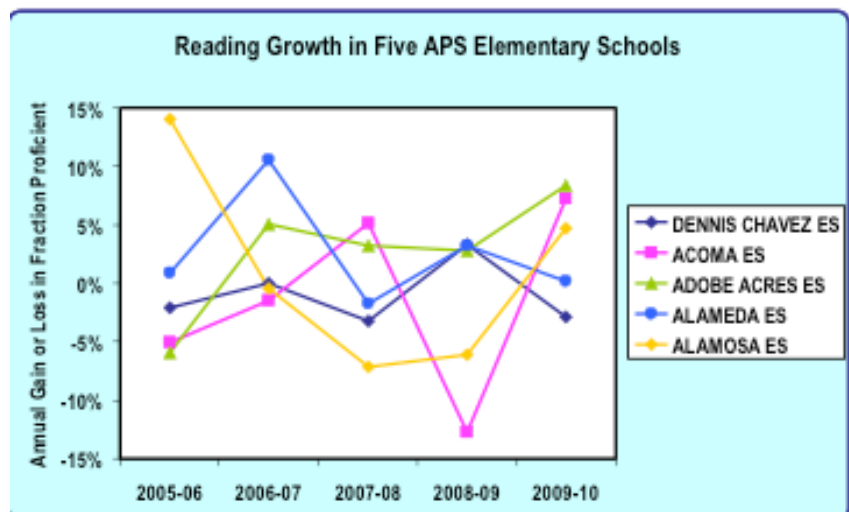


Figure 5. Growth is somewhat chaotic for most schools, and can be significantly so for others. This is a random example from 2010 reading scores with schools picked at random. This exercise has been repeated for any year with the same results.

est 25% and the highest 75% as measures, with equal weight given to the lowest 25%. This was apparently originally done to put emphasis on closing the "Achievement Gap." The explanation on the current grading sheets for concentrating on growth above 0 states "... because they are closing the achievement gap and catching up to their higher-performing classmates." This indicates some potentially significant misunderstanding of just what the achievement gap really means. In fact, what this really does is to encourage a school district's administration to place more emphasis on that lower 25%. While this is a laudable goal, there are only so many resources to go around, and adding more to the lower 25% takes it away from the rest of the students for a given amount of allocated funding. If the state could fund schools at levels that allowed this to be less invasive, then it is laudable. However, this does not address the achievement gap to any significant degree, and it causes other students to suffer some lack of needed attention. It is, simply put, not fair. While it is true that some of the lower 25% of students can make up some part of the achievement gap, it is also true that the greatest portion is reflected by the schools' demographics. Less advantaged demographic schools make up the preponderance of this gap, not individual students who are less advantaged demographically. We can see from the test scores that these less advantaged students begin to excel when placed among the more demographically advantaged. That is, this is addressing the wrong problem in the wrong place, plus, we know from the data that **all students with reasonable cognitive ability are capable of learning. And the students' demographics do not control the cognitive ability (except in the worst of cases), but do explain school performance on standardized tests.**

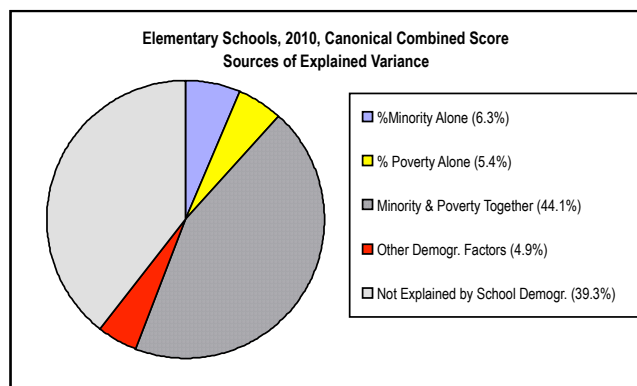


Figure 6. This pie chart shows that FAY (in the red slice) has very little correlation with test performance. In fact, this chart shows other important factors that will be discussed later, including the fact that the largest, single demographic factor correlating with test scores is the *combination* of ethnicity and poverty. In New Mexico, depending on the subject and year of testing, schools only explain between 20 and 40% of a school impact on its students (on average).

Finally, one of the questions generally asked is “How do the ABCDF scores and grades compare with the actual test scores?” Most who ask this question believe that though some of the parameters that contribute to the grade are worth tracking, the real information that standardized tests provide is simply contained in the scale score. (We do not have any good reports that tell us how students taking multiple standardized tests versus taking just a few tests correlates with actual student learning.) To answer that question, we invite people to hop on a computer, open a browser, and go to http://www.cese.org/wp-content/uploads/2014/10/CESE_LESC_MKJFinalCommented1.pdf, page 14. (The graphic takes significant room that we cannot afford in this newsletter.) It shows the direct comparison of the ABCDF scores and grade assignments by the PED compared to the actual test scale scores as averaged for each elementary school in the state for combined reading and math for the 2011/2012 school year.

The correlation is about 0.55, which is considered moderate by educators, and is to be expected, considering that most of the schools’ PED scores are based on the test scores. But when one actually looks at the comparisons of individual school’s grades, it becomes clear that there are many instances of two schools scoring nearly the same on the test as another school, yet receiving a very different PED score and grade. **There are numerous examples of schools receiving an A or**

B grade while scoring at a D or F level on the test (and vice versa). This is simply put, very misleading for the schools, and is very confusing with respect to schools really understanding how well their students are performing based on the test data. This creates a large degree of uncertainty and begs the question concerning what the school should do next, whether they are scored too high or too low. The PED appears to be mute on answers to these questions.

However, CESE is not mute. We have developed a method that we believe will show the path to improvement for all schools based on the standardized test scores. We realize that standardized tests are probably not truly reflective of a student’s actual cognitive and particularly, non-cognitive capabilities in many cases. Non-cognitive abilities include such things as perseverance, ability to concentrate, etc. These are qualities that very often lead to success in life, regardless of the career or college path a student chooses. They can be just as important as cognitive learning, and often in the real world even more so.

In the next edition of the Beacon, to follow shortly, we will address the CESE method that is mentioned above. We will also spend a reasonable amount of column space addressing the current method used to evaluate teachers, specifically that part associated with basing 50% of their evaluation on student growth. Of course, there are other factors that contribute to teacher evaluation, but this one is the most controversial, and with good reason. We will try to get this next issue out very soon after publication of this issue.

The contents of this current issue can stand alone. But they also form a needed background to the next issue of the Beacon. We sincerely hope that our readers will read both of these and take away some of the very important points raised.

We will not address such things as Common Core Standards and the new PARCC standardized test designed for Common Core. We simply do not have enough data to do so properly —yet CESE prides itself on looking at educational issues and gathering information, or data, if you will, and trying our hardest to be unbiased in our assessments. We depend on data, though. Wherever it leads, we follow, and we analyze based on data. When we believe we can present these topics fairly, we shall do so. But we will not do so until we think our analyses are worthy..

ANNOUNCING A TALK AND BOOK SIGNING BY **DR. MICHAEL SHERMER**

February 21, 2015

Starting Time: 1:30 PM

**Location: The First Unitarian Church of Albuquerque
3701 Carlisle NE, Albuquerque, NM**

Admission: FREE

**Sponsored by: The Coalition for Excellence in Science and Math Education and
The New Mexicans for Science and Reason**

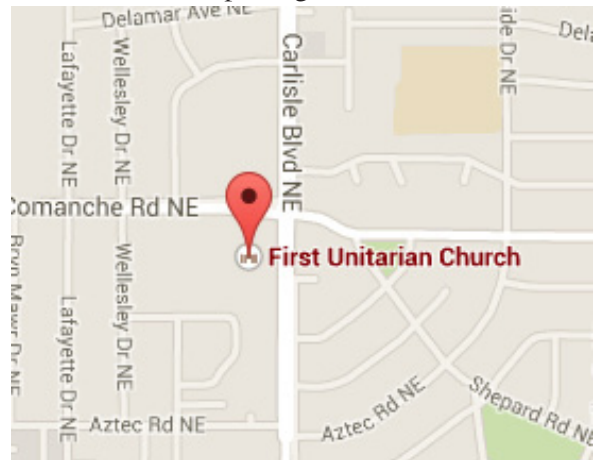
Dr. Shermer's topic will be:

The Moral Arc of Science How Science Has Bent the Arc of the Moral Universe Toward Truth, Justice, Freedom, & Prosperity

Description:

The arc of the moral universe bends toward truth, justice, freedom, and prosperity thanks to science—the type of thinking that involves reason, rationality, empiricism, and skepticism. The Scientific Revolution led by Copernicus, Galileo, and Newton was so world-changing that thinkers in other fields consciously aimed at revolutionizing the social, political, and economic worlds using the same methods of science. This led to the Age of Reason and the Enlightenment, which in turn created the modern secular world of democracies, rights, justice, and liberty.

Dr. Michael Shermer is the Founding Publisher of Skeptic magazine and editor of Skeptic.com, a monthly columnist for Scientific American, and an Adjunct Professor at Claremont Graduate University and Chapman University. Dr. Shermer's latest book is The Believing Brain: From Ghosts and Gods to Politics and Conspiracies—How We Construct Beliefs and Reinforce Them as Truths. His last book was The Mind of the Market, on evolutionary economics. He also wrote Why Darwin Matters: Evolution and the Case Against Intelligent Design, and he is the author of The Science of Good and Evil and of Why People Believe Weird Things. Dr. Shermer received his B.A. in psychology from Pepperdine University, M.A. in experimental psychology from California State University, Fullerton, and his Ph.D. in the History of Science from Claremont Graduate University (1991). He was a college professor for 20 years, and since his creation of Skeptic magazine he has appeared on such shows as The Colbert Report, 20/20, Dateline, Charlie Rose, and Larry King Live (but, proudly, never Jerry Springer!). Dr. Shermer was the co-host and co-producer of the 13-hour Family Channel television series, Exploring the Unknown.



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