



The **BEACON**

News from The Coalition for Excellence in Science and Math Education

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Queries? email Rebecca Reiss (next page)

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President's Message: Ken Whiton

The 2019 Annual Meeting of The Coalition For Excellence In Science And Math Education will be held Saturday, June 1. As in the past several years, we will be meeting in the Anthropology Lecture Hall, Room 163 in the Maxwell Museum on the University of New Mexico campus.

We are pleased to announce that this year's speaker will be Dr. Karen Trujillo, Secretary of Public Education for New Mexico. Dr. Trujillo has chosen as her topic, "A Shared Vision of Student Opportunities for Success in New Mexico."

Dr. Trujillo has been an educator in New Mexico for over 20 years. She received her B.S. (1992), M.S. (1993), and Ph.D. (1998) in mathematics education from New Mexico State University (NMSU). She has been a teacher, an administrator, a professional development specialist, and a researcher.

As Director of the Alliance for the Advancement of Teaching and Learning (NMSU), she established the first statewide career technical student organization for future teachers, Educators Rising, because she believes we have to begin encouraging students to become teachers in high school and also in college and mentor them in their first five years as teachers.

Dr. Trujillo established the Southwest Outreach Academic Research (SOAR) Lab at NMSU to study the impact of professional development and student engagement programs in New Mexico. The SOAR Lab uses mixed methods to study how programs that serve students and teachers impact teacher practice and student learning. As Interim Associate Dean of Research in the College of Education, Dr. Trujillo worked with faculty to establish research partnerships.

Her experience from Pre-K to higher education

provides her with a unique perspective on education in New Mexico.

Because your CESE Board of Directors wants to give Secretary Trujillo as much time as possible for her presentation and for a Q&A when she is finished, I won't take valuable time during our Annual Meeting for a synopsis of what this organization has accomplished over the past year. Instead, I will share those accomplishments here.

Please understand that because The Coalition For Excellence In Science And Math Education is a 501(c)(3) organization, we are required to be nonpartisan (however, we are allowed to accept unlimited contributions.) This means that nothing I'm writing here should be interpreted as endorsement of any candidate, elected official or political party, although we can express points of view and give our perspective on legislation.

As usual, our all-volunteer board members have been working hard over the past year.

If you've never read and/or analyzed any of the legislation introduced in the New Mexico State House or Senate, you'll never know about all the fun you've missed. I'm sure any legislator in our audience on June 1, or one you know, will be happy to fill you in on those details.

Actually, you don't need to do that because members of our CESE Board have attempted to do this for you. Over 600 bills relating to education were introduced in the recent Legislative session and these folks dug through those that passed and provided expert analysis for three bills. You will find the results of their work inside this issue.

Two other bills, had they become law, would have codified a problematic teacher evaluation method. Changing that method in response to changing

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Visit our website at <http://www.cese.org>.

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E-mail Beacon submissions to Editor, Rebecca Reiss,
rebecca.reiss@nmt.edu

situations would be difficult. Opposition to these bills might reinforce the belief that teachers don't want to be evaluated; actually these bills would have created inappropriate evaluations for some teachers. No matter how many times you've seen reports of teacher opposition to evaluation in the media or read it in editorials, Op-Ed, and letters to the editor, teachers want to be evaluated. All they are asking is that the system be statistically sound, fair, take into account the challenges their students are facing, and help students, teachers and schools grow rather than be blamed and shamed.

A high percentage of our teachers are capable, well-trained professionals who are working every day to educate their students to reach their greatest potential and be successful in whatever career they choose. These teachers need to be encouraged and guided to become even better. They deserve our appreciation, respect, and support. Those that are not meeting their obligations and are unwilling or incapable of improvement need to be counseled out of the profession. Teachers in both categories, and every category in between, deserve an evaluation system that is fair.

The same is true for school evaluations as we addressed in a previous Beacon (vol. XX, #4.) Schools want, deserve and need the same kind of careful and professional treatment. Based on its pronouncements, these are things the previous administration was never able to fully understand.

CESE Board Members are looking forward to working with a Secretary of Education who is able to explain the problems in a clear, transparent and comprehensive manner. Someone with a new approach based on the research and analyses performed by professionals who are expert in these matters, including CESE, which has been studying and researching these issues for over two decades.

Let's work together to create an honest, accurate evaluation system that respects students, parents, teachers and school staffs. This means a system that gives all of them the positive guidance they deserve rather than punitive consequences. This means a system that achieves the things members of this board have discussed many times with legislators, legislative committees, school district superintendents, school boards, in the media, and in The Beacon.

We are sincere in our hope that our new Secretary of Education is the right person for this job. The board of CESE promises to always provide our best objective analysis based on decades of study and research. We may not always agree with what PED does but you can count on us to be straightforward and honest.

PS: I've thoroughly enjoyed serving this extraordinary organization as your president for the past year. I know CESE will continue to grow and serve all our students, parents, teachers and school staff for many years to come.

The 2019 Legislative Session Summary: Education Bills with Significant Impact

It was a busy legislative session. Governor Lujan Grisham signed 282 bills (according to KOAT TV in Albuquerque). Of these, 61 (22%) involve the Public Education Department (PED) or affect K-12 education. Thirty-one bills that involve higher education (11%) and 48 (17%) affect children, state retirement, and professional certifications. These do not include all the bills that may have a peripheral or minimal impact or those bills that are annually connected, such as the budget bill.

Major public education bills

Among the public education bills, several have long-term impact and institute substantive change in educational policy. Others may create or mitigate controversy. Some bills are notable in that they did not pass. The following provides a short synopsis and impact analysis of the most important bills as determined by the CESE Board. This includes both the bills that were signed and some that did not pass. The analyses will include a short discussion of background issues that may be of interest and have downstream impact not apparent in the synopses.

The synopses of signed bills are from the Governor's web pages (<https://www.governor.state.nm.us/about-the-governor/2019-signed-legislation/>.) We will expand or modify these as appropriate for the purposes of this article. In one case, we identify an error that has hopefully not been propagated further than the web page, one which would have been significant regarding charter schools were it true. Each signed or failed bill addressed may have been introduced in substantively the same language, if not the same, in both the Senate and the House. Rather than dwelling on them separately, we address the final, signed bill (now a statute or act).

Major Changes to Public Education

This was the largest, most encompassing education bill and was introduced simultaneously in both chambers as House Bill 5 (HB5) and Senate Bill (SB1). The reconciled bill that passed was signed and is now law. Here is the Governor's web page description:

"Requires annual school education plans and

performance-based budgeting; *imposes a statewide charter school enrollment cap*; makes K-5 Plus an ongoing formula-funded program; creates a Public Education Reform Fund; increases teacher and principal minimum salaries; and caps age eligibility for public school students at age 21, among other things."

There is an error in this description, shown in italics. Though there was a cap in the number of students for charter schools in the original bills, it was deleted during the education committee hearings in both houses. This proved to be problematic to those people who had extant charter school contracts as well as many who were preparing to initiate a charter school. There is much more that can be said about this, but it would take considerable room and be divergent from the general topic at hand.

One of the major changes in these bills was the reworking of School Equalization Guarantee (SEG), generally called the funding formula, though that verbiage is not contained in the act. The revisions are fairly complicated. They do a number of things, one of which on the funding front is an attempt to address a court ruling (*Yazzie/Martinez v State of New Mexico*) requiring [paraphrasing] that New Mexico take all necessary steps to ensure that at-risk public school students have the same opportunities to succeed in college and career readiness. There were several other items, either explicit or implicit addressed in this decision, including the availability of special programs to service at-risk students. Time will tell to determine if that is the case as per the court's decision.

The act also adjusts per-pupil allocations, and some of these adjustments impact most schools' funding. Some schools and districts are happy, and some are not. In particular, it adds money for a K-5th grade program, an extension of the K-3rd grade program that already exists. It also changes what is generally called the small school funding formula. This gives small schools additional funds to account for larger schools' and districts' overarching infrastructure. However, the formula is applied to charter schools with less than 400 students, too. Charter schools of this size that do not have access to the overarching infrastructure require more money, as do regular public schools with similar needs. Or that is in part the reasoning.

Finally, as far as major items the act addresses, it adds an across-the-board increase for teacher and other school employees' salaries. The increases are an attempt to make New Mexico more competitive and to help provide what will be closer to a living wage. This adds considerably to the general appropriations bill's education budget, but there are very few negative reactions.

The School Support and Accountability Act (SB229)

This bill did several things including: 1) repealing the A-B-C-D-F Act, and 2) setting up a very similar measurement system as the A-B-C-D-F act specified, and 3) defining a dashboard for school accountability, or perhaps more appropriately, for performance visibility. It also defines a number of terms with some shifts in meanings, but not substantively. It provides more visibility such that resource allocation from the state can be more efficiently and appropriately allocated. Here is the description from the Governor's web site:

"Creates a new process for ranking public schools that designates four levels of need for support based on specified factors; determines how those factors are to be measured; requires the Public Education Department to provide a technology platform for a school dashboard of identified characteristics and ratings for each school; and requires PED to ensure that a local school board prioritizes resources depending on its designation. Repeals the A-B-C-D-F School Rating Act."

Many people have become used to the letter grades and accepted them as a good measure of how well a school was performing despite all the real problems with the actual veracity of the school grades as a good measure of performance. This says nothing about the real problems with the vast majority of district superintendents, school principals, and the public at large concerning real understanding of how the grades were actually determined. For school personnel, there was little guidance as how to improve school grades. There are sufficient differences in the School Support and Accountability Act such that the old A-B-C-D-F Act and the new one cannot be aligned, though there will probably be a tendency for people to try at least initially. Note that the scoring elements are almost exactly the same as specified in an administrative rule that was placed

into the New Mexico Administrative Code (NMAC) 6.19.8 by the previous Secretary Designate Ruszkowski just before the new administration was sworn in. This includes the addition of science, chronic absenteeism, and transformation to only student growth rather than combining with Value added model (VAM) determined school growth.

The School Support and Accountability Act specifies assessment elements, most of which follow from the US ESSA (Every Student Succeeds Act) law, reauthorized in 2015. There are additions, as mentioned above. Probably the most important is the use of student growth as a heavily weighted scoring element. ESSA allows student growth or progress to be used but does not require its use.

CESE has briefed the Legislative Education Study Committee, the Legislative Finance Committee, and written multiple articles on about why the A-B-C-D-F Act and its implementation were inappropriate. We now find that this new School Support and Accountability Act actually has the same basic problem, a heavy emphasis on growth.

The PED has not specified how it will calculate growth of the students. As per the act, student "growth" will be calculated by student performance quartiles of Q1, Q2 combined with Q3, and Q4, all weighted differently. It does not account for the fact that capacity for growth varies considerably depending the school's demographics and initial proficiency level. If student growth is calculated as it was for determining a school's grade, then a method called the student growth percentile (SGP) will be used. Theoretically this accounts for some of these input variables, but as a school increases its performance level, growth becomes more and more difficult. At some point, some schools are already at those levels. This results in the need for very accurate, high precision standardized tests to allow the measurement of small differences in increased achievement. It is not at all clear that any such test exists according to many research efforts. Nor is it clear what will happen if a school that is near the maximum in criteria based performance (very high proficiency scores) that it is fair to decrease its numerical score because its students do not grow as fast, or even lose a percentage point or two in proficiency rating while still scoring well above the state average. With such high weightings on growth,

a very low proficiency achieving school could easily far outscore a high proficiency school simply because its growth causes a much higher allocation of growth points, even though its students are performing far below the other school. This actually happened using the prior grading system, all because of the growth component.

The School Support and Accountability Act does not specify how or why chronic absenteeism now devolves to an individual school, since there are many cases where a school has little control over this. Even though the weighting of this factor is low (5% as is being implemented), it will probably become a contentious element. However, since this is now in statute, rather than an administrative rule, it will be difficult to change and may result in an unwanted diversion from the rest of this assessment. We realize that chronic absenteeism is a very big problem for New Mexico in general. We also realize that schools can impact this. But it is not clear how much a school can without spending more money or burdening teachers with the responsibility more so than they already have.

At its root, it is not clear how much change for the better will accrue because of the School Support and Accountability Act. A dashboard was already set up, though probably not as useful overall as the new one will be. The “levels of need” regarding how a school is classified have been redefined somewhat, and some of the specific elements have been changed. In general, the primary difference is in emphasis on what the act is supposed to accomplish. The intent in using the assessments specified in this act to help schools understand where to improve, not to punish them, which we and many others saw as the tone of the old grading and classification system. Assessment is still codified and will be difficult to change. Perhaps there will be a perception change regarding whether the schools are being punished or helped based on this act. But ultimately this remains to be seen when the act is fully implemented (target SY 2020-2021).

The Early Childhood Education and Care Act

The passage and signing of SB22 establishes a new department, as summarized as follows:

“Creates the Early Childhood Education and Care

Department (ECECD) as a cabinet-level department to manage, operate and administer all early childhood education, early pre-kindergarten and pre-kindergarten education programs and eligibility, child care assistance programs, and the Early Childhood Care and Education Act (birth to age 5). The first segment of the bill relates to the structure, responsibilities and duties of the new department and the later segment makes reconciling name and several substantive law changes to existing sections of law.”

This act appears to be long needed: the consolidation of early childhood programs and control, thereof, under one authority. There are almost certainly going to be some problems with this, but it is very hard to see how a single-point coordination effort will fail to provide better services, better distribution of resources, and save money, perhaps considerable, though that is to be determined after the initial setup and program consolidation is over. So, give this one a year or two, then judge its effectiveness.

Bills that Did Not Pass

There were two other issues that did not make it through the legislature. "Permanent Funds for Early Childhood" (HJR1) was a well-publicized intent to change the school permanent fund to increase the withdrawal of interest that is now being reinvested back into the fund. The extra withdrawal was for statewide pre-K funding, which was a part of the Governor's platform. This was very controversial with many people saying that it would decrease the amount of money potentially available in the long run to fund schools, because the fund would not grow as fast. The idea is basically that if the fund continues to grow enough, then there would need to be less and less money that had to be withdrawn from the general fund for education. People arguing for the bill stated that universal pre-K was necessary to raise the student performance level so that New Mexico's students could be competitive with any other state's. Earlier analysis performed by CESE indicated that highly successful pre-K programs that were targeted to the population most needful have shown very good success in some states. But these are very expensive programs that would best serve only those with the highest needs. It was not clear from the bill that these types of programs would be the recipients of the

added money, especially if universal pre-K were to be implemented rather than targeted. However, the bill died in the Senate Finance Committee (Action Postponed Indefinitely – API). It could very well be re-introduced in next year's legislative session.

Two very similar bills, one in the Senate (SB247) and one in the House (HB212) dealt with teacher evaluations. The House bill cleared a floor vote, but was not reconciled with the Senate bill, and both died. These bills specified that a teacher be, in part, evaluated using similar criteria to those (not identical) used over the past eight years. There are two major problems: the bills would have placed the elements of teacher evaluations into statute. Any changes identified downstream would have required legislative action to enact, rather than the much simpler administrative rule change process. The second problem was that both relied on growth as an evaluation element. Growth is often very difficult to measure with accuracy at a teacher's student load level. Additionally, this would require, in the interests of fairness, that all teachers be treated the same for evaluations. This could have gone to court to enforce this, particularly if the state did not fund the creation of professionally developed standardized tests for each subject matter taught in public schools. Consider measuring the growth of students taking US history for the first time in high school. What would the growth baseline metric be? How does one measure student growth for physical education classes? One can imagine many such related cases. There are other problems for which solutions were tried in the last administration. One was to use in-state generated, non-professionally vetted tests called end of course (EOC) tests. These tests were simply not accurate or fair enough to different student demographics for measuring growth across the state.

Conclusion

This is simple: hold on to your hats for the next two years. There is a lot to do as far as implementation and testing is concerned. Many times, a statute cannot be properly judged, especially in a complicated field such as education, without allowing time for full implementation, adjustment, and analysis. As the consequences of these laws become clear, CESE will be here to analyze and provide data-driven guidance. Stay tuned!

CESE and NMSR Science Fair Winners

Every year, CESE teams up with the New Mexicans for Science and Reason (NMSR) to make special awards at the State Science Fair at New Mexico Tech in Socorro. A high-school and middle school project are selected for a \$200 prize. We select the projects that best used the scientific method to solve, or help solve a real-world problem that has direct application to improving the world condition.

This year, the high school winner was Lane Clavel, Roy High School, for his Senior Biomedical and Health project "Pump Up the Protein." Lane's project produced an answer to the question "Is there a significant difference in protein concentrations between beef and wild game?" Raising beef has many environmental downsides, and Lane was curious to see if wild game was a better source of protein than beef. He found that there was no significant protein content benefit in choosing wild game venison over beef. The junior high-school winner was Julian Singell, Los Alamos Middle School in Mathematical Sciences, "Are New Hire Capabilities Accurately Evaluated During the Hiring Process?"

In Memoriam

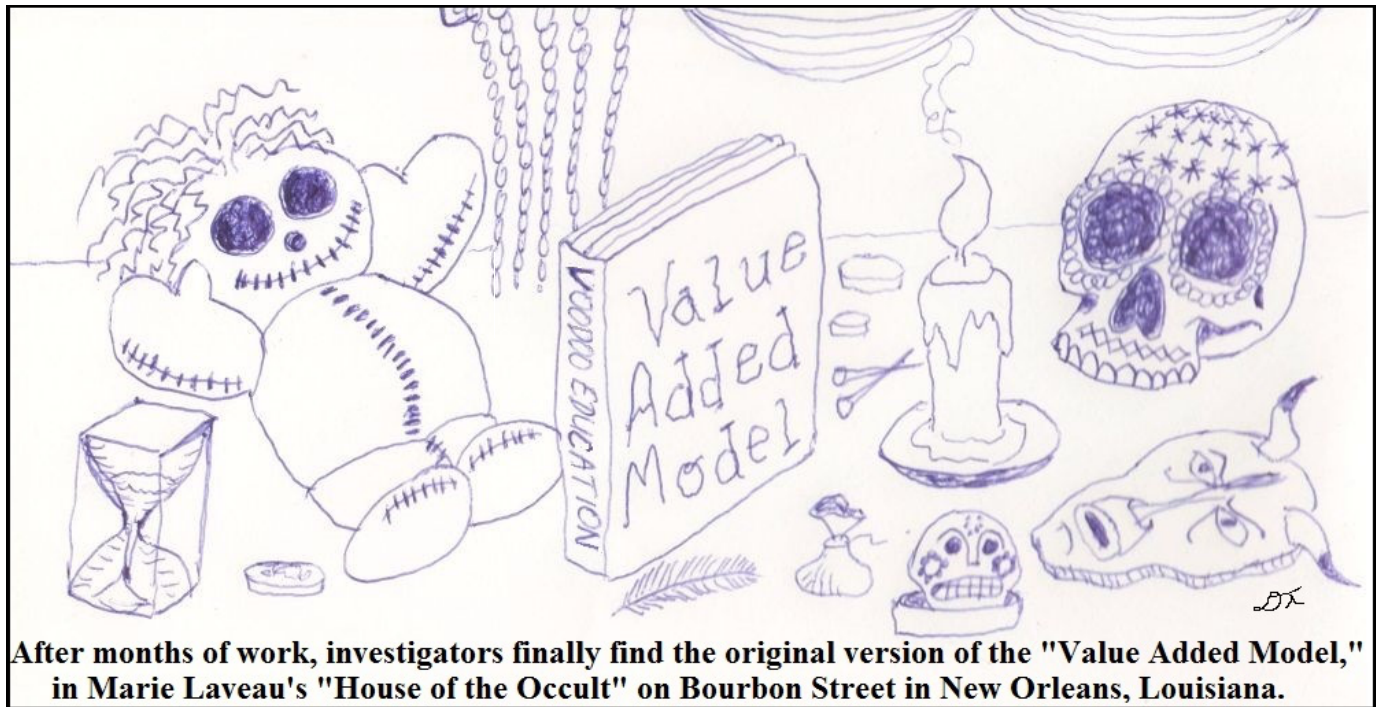
Dr. Toby L Merlin (1952 – 2018)

We are saddened to learn of the passing of Toby L. Merlin, M.D. Dr. Merlin was a lifetime member of CESE, who resided in Albuquerque from 1984 to 2003. He was a pathologist who worked at the UNM School of Medicine, the Veterans Administration Hospital, and Lovelace Health Systems. He joined the Center for Disease Control in 2003.

Dr. Mel Eisenstadt (1931-2019)

We also mourn the passing of Mel Eisenstadt, a member of CESE since we first became an official organization. Mel was a man of multiple talents. He had PhD in mechanical engineering and a law degree. Mel worked in both fields, including teaching as a professor, authoring mechanical engineering texts, and serving as a judge in Corrales, NM. He was an author, a jewelry maker, and too many things to list here. He was pro-science and involved as a community activist.

A Toon by Thomas



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Are you concerned about the future of public education in NM?

Then this is a must-attend event!

**The Coalition for Excellence in Science and Math Education
is pleased to announce our 2019 annual meeting speaker will be**

Dr. Karen Trujillo

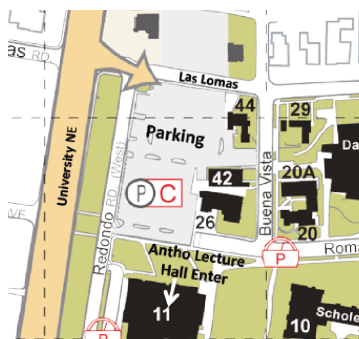
Secretary of the NM Public Education Department

**“A Shared Vision of Student Opportunities for Success in
New Mexico”**

Free and open to the public

Saturday, June 1, 2019, 1:30 - 4:00 PM

Maxwell Museum Lecture Hall, UNM Campus



Directions: From Central and University, go north on University until you get to Las Lomas. Turn right, then left into the parking lot. The lecture will take place in the Anthropology building lecture hall, immediately south of the parking lot. Parking is free on Saturdays.

We look forward to seeing you there.