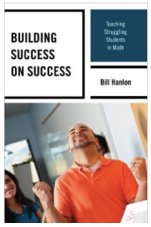
Nevada Public Education

Nevada's Teacher Evaluation System (NEPF)
Another Failed Reform

Bill Hanlon

The state's teacher and school evaluation systems fail students – the data is the proof.



The Nevada Educational Performance Framework (NEPF) is just one more of the Governor's touted ***educational reforms*** that doesn't do a thing to improve math instruction that would result in improving your sons and daughters' experiences learning math. Adding to that is the inherent idiocy in the Nevada School Performance Framework (NSPF) that is a real concern to school principals. What's clear about these frameworks is the people pushing them seem more interested in "***looking good***" than "***being good***".

Nevada is not going improve math education that results in increased student achievement using an evaluation system, the NEPF, that does **NOT** address teachers' content knowledge. This is just another reason the state is ranked dead last again on the ACT.

Building principals are tasked with so many things, pulled in different directions, going to meetings, trainings, etc., that the most important part of their profession that affects student achievement seems to get shortchanged – evaluating instruction. School administrators often have to ***find time*** to observe instruction. A typical school administrator's day is scheduled with continual interruptions. Those include hall duties every 50 minutes for five minutes, multiple 30-minute lunch duties and before and after school bus duties. Then there are the student and parent conferences about classroom issues, parental involvement meetings, meetings with individual teachers, meeting with their supervisors and the list goes on and on.

The NEPF system fails students even without the ***"finding time"*** issue. There are certain things school administrators can do; they can observe if an objective was stated in the beginning of the class, if the instruction had closure at the end of the period. They will have a feel by observing students if the lesson was delivered in understandable terms. They can observe students' guided practice to see if students can do the problems of the day. They can examine student notes, determine if a highlighting system was used, see if the homework assignment complemented the instruction, and discuss test preparation procedures to try to determine if it's truly measuring standards rigorously, teaching bell to bell, being positive, building rapport, discuss pacing, and classroom management issues. They can collect student data, grade distributions, and discuss student performance. So, there's things school administrators can do to improve student experiences in the classroom. ***But***, …

If school administrators do not have a math background, that limits what they can do in providing suggestions, recommendations or directions to increase student understanding of mathematics. And, with a national teacher shortage and the need to bring in more and more new teachers coming in from districts or universities' alternative licensing programs, Teach for America (TFA) and The New Teacher Project (TNTP), these teachers don't necessarily have a good background and understanding of math. In fact, some might only have a business degree teaching high school math, which clearly does not require the same level of math as people with degrees in math. That background is not sufficient to teach math in high school or middle school. Colleges of education also have to do a much better job preparing their students for one of the most important professions in the country.

Let's look at a few "for instances". A teacher might be explaining square roots in middle school or high school when solving quadratic equations. Perfect squares will be introduced, then the teacher might explain inverse operations, then say $\sqrt{9} = \pm 3$. So, everything is looking good, except for one thing - it's wrong! The $\sqrt{9} = 3$, just positive 3. The Closure Property guarantees one and only one answer in a computation problem. The same would be true as students' progress through mathematics, too many students are being taught the $\sqrt{x^2} = x$. Again, that's wrong. The correct answer is |x|. While students might get those questions marked correct on a teacher's chapter test because that was the way it was taught, it would be wrong on high-stakes tests like the ACT/SAT. The point, that's just basic math and my experience is a school administrator would not realize that the math was taught incorrectly.

School administrators would not know if notation should be introduced or if it was correct notation being read appropriately. $\forall x \in R, \exists!(-x) \ni x+(-x) = 0 \wedge (-x)+ x = 0$ – is the definition of the Additive Inverse This notation is used around the world – math is a universal language– it should be taught. Principals might see a formula dropped on the board like sum of angles of a convex polygon is $(n–2)180^\circ$ and not know it should have been developed by drawing diagonals inside a polygon from one vertex to see the relationship between the number of sides of the polygon and triangles formed to increase student understanding of where that formula came from. My belief is that it is not a matter of ***"if"*** students will forget information over time, it's a matter of ***"when"*** they will forget**.** How would students be able to reconstruct that knowledge if they never understood where formulas came from in the first place?

Building principals would not know what concepts should be developed by linking. They wouldn't know if the examples are simple, straight-forward examples that don't contain variations when new concepts are introduced. Would they know that operations with whole numbers learned in elementary school should be connected to algebraic operations using the same standard algorithms? Would they know the Pythagorean Theorem, Distance Formula, Equation of a Circle and Trig Identity, $\cos^2 x + \sin^2 x = 1$ are all the same formula just written differently because they are being used in different contexts? Those linkages provide opportunities for teachers to review and reinforce previously learned math or address deficiencies to help them succeed.

Would a principal know when teaching long division with 2-digit divisors, teachers should not use 11, 12 or any number in the teens as a divisor during initial instruction? Students ability to learn the procedure and successfully divide would increase if they were initially introduced to long division using divisors like 51, 52, 21, or 22. After that, moving on to two-digit divisors

that could be rounded down to the nearest ten. Then, scaffolded so any divisor can be used. Would they know that standard division algorithm is used to divide polynomials, synthetic division and synthetic substitution to evaluate functions or later to solve higher degree equations using the Rational Root Theorem – doubtful.

If principals don't know these things, what recommendations could they possibly make to improve math instruction? Why do we insist on making math more difficult for students by not addressing how math concepts and skills are actually being introduced to students? Nothing ruins a math lesson like a bad example. These bad examples turn into terrible learning experiences for students and results in a mindset that they can't do math, that math is too hard.

Until we realize that to evaluate math instruction effectively, content also has to be evaluated as well, then students will continue to lose. It's time Nevada looks beyond resume building evaluation programs that emphasize ***"looking good"*** at state level to just "***being good"*** in the classrooms. Nevada's teacher evaluation system, (NEPF), does precious little to address our students' difficulty in math. The data is clear, this is just another failed reform. A reason why we are ranked dead last on the ACT.

Evaluation systems must include is at least one person on a team who has the content expertise to ensure that the math is being taught correctly and knowing how to introduce math concepts and skills that results in students feeling more comfortable in their knowledge, understanding and application of math. A teacher's knowledge of math content, strategies, resources and assessment must be part of the solution. That knowledge impacts their instruction. Because of our teacher shortage, terrible working conditions, lack of supplies, support and huge class sizes, our students underqualified teachers really need this help.

Bill Hanlon, is a noted speaker, an author, educator, consultant and coach for schools, former Director of the Southern Nevada Regional Professional Development Program, and is a national presenter for organizations such as AASA, ASCD, ALAS, NMSA, NASSP, NSBA, and NCTM. He was the coordinator of Clark County School District's Math/Science Institute and was also responsible for K-12 math audits. He served on the Nevada State Board of Education, Regional Director of the National Association of State Boards of Education (NASBE) and as a member of the National Council for Accreditation of Teacher Education (NCATE) States Partnership Board. He also hosted a television series, "Algebra, *you can do it!"* on PBS Las Vegas.

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