

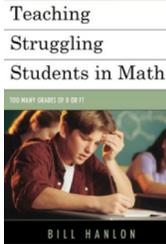
Nevada Public Education News



NV - Widening the Achievement Gap

Bill Hanlon

Whether you attend a school in an affluent area or poor area, math content and expectations should be the same for all students. In Nevada, the policy and practice is to say that but offer students with the greatest needs, coming from our poorest communities, a course in MathLight taught by inexperienced teachers as opposed to the Math being offered in the more affluent communities by experienced teachers. This will result in a widening of the achievement gap.



Governor Sandoval, former state superintendent Dale Erquiaga, and Board President Elaine Wynn have not paid attention to the extremely important role classroom teachers' play in addressing student achievement. This policy and practice gaffe has resulted in, and will continue to result in, lower expectations for these student populations.

These three want people to believe that teacher experience does not matter. So they, and others, continually insinuate first and second year teachers are as good as experienced teachers.

There is no sense in letting the facts get in the way of failed policies that have driven Nevada's rank to dead last in the nation. For instance, the Teach for America research states that TFA teachers are as good as other *first* year teachers. In other words, they are not comparing them to *experienced* teachers, but to other first year teachers.

Everyone has to be a first year teacher sometime and hopefully grow from that experience. But TFA teachers only commit to two years. The research also suggests it takes approximately seven years for teachers to reach their full potential. But hiring teachers whose commitment is only two years places our

students' education in jeopardy, but is also a waste of time, resources, effort and dollars to try and continually train these young men and women. It's hard to build a winning culture in schools with these high turnover rates. I support hiring these young men and women, but let's place them in schools where they will have a better chance to succeed, so our students have a better chance to succeed.

Experience matters! Good, experienced secondary math teachers not only know their content, but they know where and how it was first developed and introduced so they can build on that foundation. They know where students traditionally experience difficulties so they can address those concerns during their instruction. They know what examples to use to increase student understanding and not bogging students down in arithmetic. Experienced teachers know what comes next in the curriculum to ensure their students are ready for the next class. Experienced teachers have developed routines and expectations that assist student learning.

New teachers are just that – new. They are trying to figure out what to teach, how long to teach it, they don't have instructional strategies or resources that support student learning, how to assess what they have taught nor the types of questions their students will encounter on high stakes district, state, or national tests. They also tend to have more classroom management issues. For the most part, they are struggling – that's what most first and second year teachers do. Nevada, by design, has too many first and second year teachers.

Many of those inexperienced teachers just don't have the content knowledge that affects their instructional decisions. They teach math like it's about a lot of isolated facts. Experienced teachers would be able to link the Pythagorean Theorem to the Distance Formula, the Distance Formula to the Equation of a Circle, to the trig identity $\sin^2x + \cos^2x = 1$. These are all the same formula, just written differently because they are used in different contexts. But by connecting them in instruction, experienced teachers are able to introduce “new” material in more familiar language making the students more comfortable and at the same time review and reinforce these important ideas.

Without these connections, here's what students of inexperienced teachers' students get as instruction. They would be introduced to an Arithmetic Sequence by definition. *An arithmetic sequence is a sequence in which every term after the first is obtained by adding a fixed number, called the common difference, to the preceding term.* Huh? Then, of course, they will tell them that the terms of an arithmetic sequence are said to be in arithmetic progression and give them a formula; $a_n = a_1 + (n-1)d$

Experienced teachers would introduce an arithmetic sequence as skip counting using multiples that were taught in first and second grades, 2, 4, 6, 8,.. or 5, 10, 15, 20, ... , then they would build a definition of an arithmetic sequence and develop formulas for finding the n th term or sum of the terms using correct notation – with understanding.

With so many vacancies and the number of first year teachers increasing, the number of experienced teachers to mentor them has decreased dramatically. Adding to that, this Governor who has been in office almost 6 years, has not invested in teacher development. He cut that budget by over 60% in his first year when the common core curriculums (Math & ELA standards) were introduced and in the most recent budget, southern Nevada school districts got zero funding for the rollout of the new “Next Generation Science Standards”.

So, while the past few years have been dismal, the next 5-10 years will also be less than acceptable as these people think just putting someone in front of a classroom is the answer. The issue, because these new teachers are not receiving the training they should, many of them will become 4th, 5th, and 6th year teachers using the same ineffective techniques they used as a first and second year teacher - without professional development for these teachers on the content they teach, without the experienced mentors, too many of our students from underserved neighborhoods students will be given the short end of the stick. And, because of lack of support, these newer teachers will leave the profession prematurely.

Instead of being enrolled in rigorous math classes, the poorest in our community are being enrolled Math *Light* classes because first and second year teachers don't know the depth of the instructional content, how to link it to previously learned math and outside experiences, nor do they have instructional and assessment strategies or the resources that would support teaching to higher standards.

Nevada can expect a wider achievement gap because students from poorer neighborhoods are not being taught to the higher standards and they don't have access to experienced teachers as their counterparts in more affluent areas.