

Wayne Bishop

An Unsung Hero, an Iron Man

Presented by

Ling Huang (Twitter: @FightFuzzyMath)

August 18, 2024

Wayne Bishop: A Math Warrior Who Fought to Uphold Upward Mobility Through Quality Education



Mathematics teacher

Proviso East High School

Sep 1964 - May 1967 · 2 yrs 9 mos

Maywood, IL

Trained to be a high school teacher as my life's goal. I expected it would be in my native small-town Iowa but I followed my new wife to the Chicago area, she suburban, me **just outside of the Chicago district but very inner-city urban - roughly one third Black, one third Italian** (Sam Giancana's estate - at the height of his "influence" - was a local discussion item), **and one third mixed White but primarily Serb or Croatian.**

I liked it a lot and never intended to leave but post-Sputnik NSF money paid me more to take a leave of absence and go to grad school.

I have maintained a lifelong interest in the precollegiate mathematics education environment - preparation of prospective mathematics teachers and several stints on state-level activities such as advisor to the Credentialing Commission and state textbook approval panels.

I continue to be active on various education listserves. **My focus is on returning mathematics education to sanity and genuine opportunity for upward mobility through education.** That was the case when I was a student more than half a century ago from **a one-room country school** to life as a professor of mathematics - so far off the horizon of my perspective at that time as to be unthinkable.

Wayne Bishop: The Math Warrior Who Fought Tirelessly to Save K-12 Math

Other Professional Activities:

- 2005 Content Review Panel for CA math curricular approval process, 2005 Supplemental Adoptions
- 2002 External study commissioned by the Pittsburgh Public Schools
- 2001-3 Judge for student papers submitted to the Southern CA Academy of Sciences
- 2001 Invited Session of the LACTMA conference, March 9
- 2000 Content Review Panel for CA math curricular approval process, 2001 SBE Adoptions
- 2000 ABC Nightly News with Peter Jennings on the NCTM Standards 2000 that aired April 12
- 2000 CNN interview on history of mathematics education of the century that aired January 2
- 1999 Interview (with picture) for Education Week on the US Dept of Ed “Excellent & Promising” lists
- 1999 Content Review Panel for CA math curricular approval process, 1999 SBE Adoptions
- 1998 Statewide Mathematics Assessment in Texas, P. Clopton, W. Bishop, and D. Klein
- 1997 AMS ARG for consideration of the Year 2000 rewrite of the NCTM Standards (PSSM)
- 1996 Invited testimony to CA Assembly Education Committee, Chair Steve Baldwin
- 1995 Mathematics Task Force of CA State Supt. D. Eastin
- 1990-2 External Reviewer for Program Review, CSU, Sacramento, Northridge, and Cal Poly, Pomona
- 1989 Project Director for CSU Resource Guide - Subject Matter Assessment for Prospective Teachers
- 1989 Advisory Panel to Commission on Teacher Credentialing - Mathematics
- 1981-2 Fulbright Prof. to Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico City

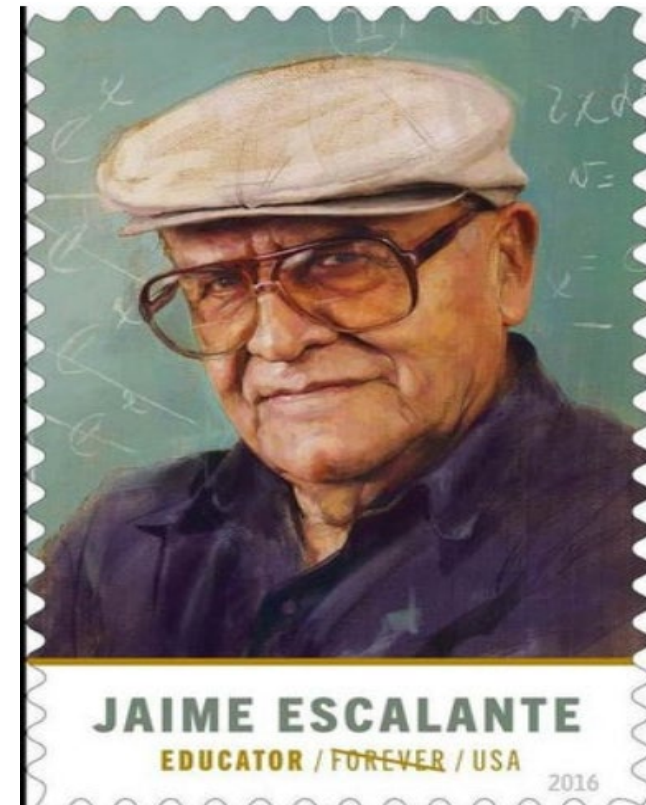
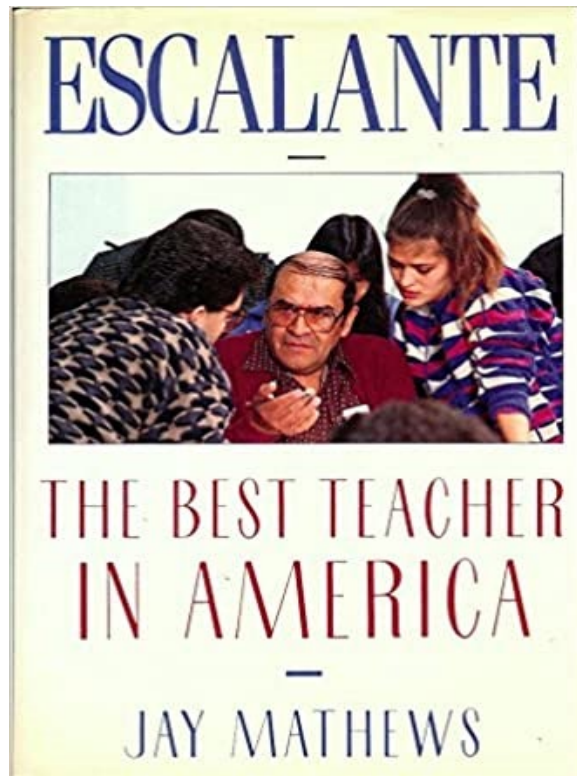
Wayne Bishop: The Math Warrior Who Fought Tirelessly to Save K-12 Math

More Recent Professional Publications and Addresses:

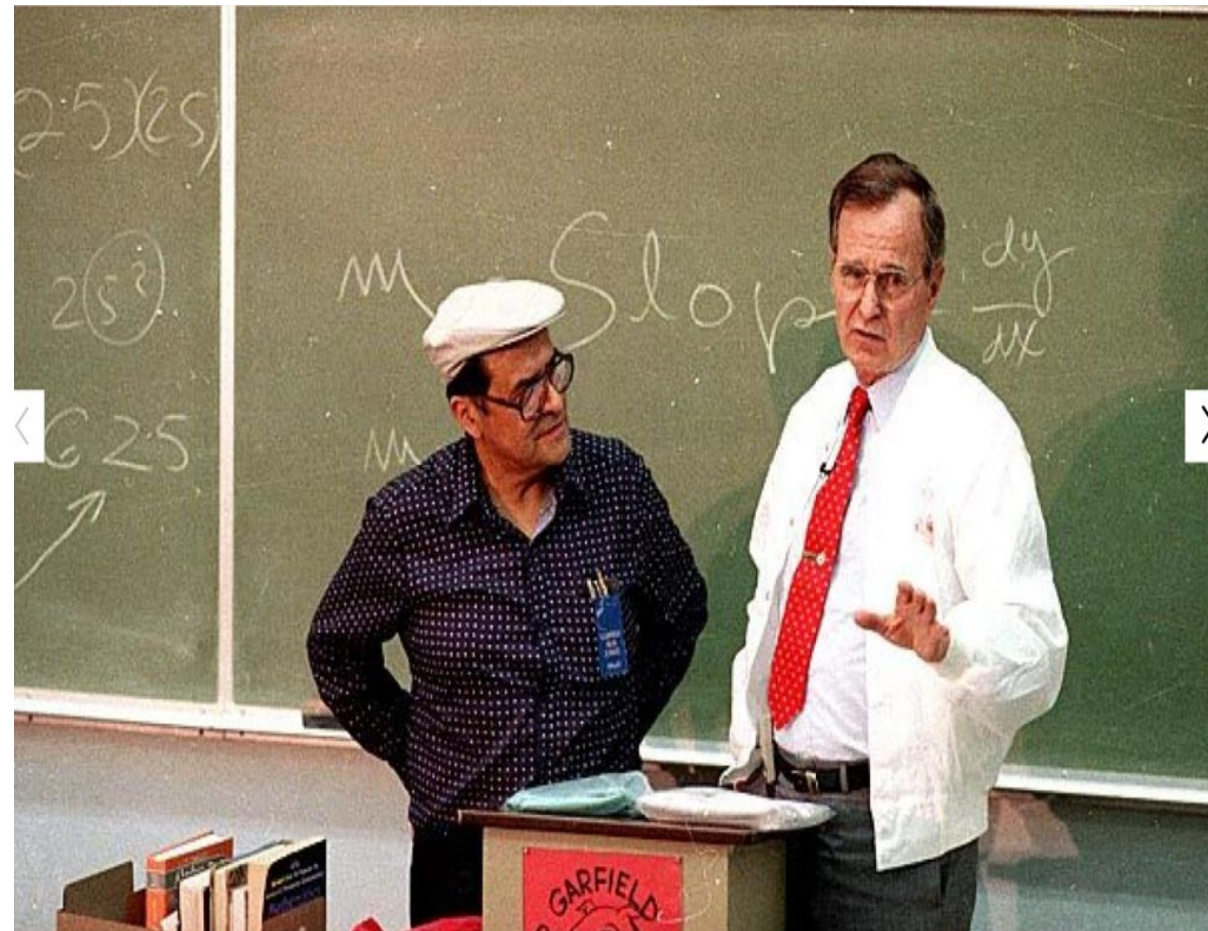
- 2007 “A Quality Math Curriculum in Support of Effective Teaching For Elementary Schools”, Hook, Bishop, Hook, Springer, Educational Studies in Mathematics, v65 n2 p125-148, June 2007 (<http://www.springerlink.com/content/013302t20rg73018>)
- 2000 What's at Stake in the K-12 Standards Wars : A Primer for Educational Policy Makers, Sandra Stotsky (Editor), Peter Lang Publishing [Contributor - Part of the Texas report]
- 1999 “The California Mathematics Standards: They’re Not Only Right, They’re The Law”, Phi Delta Kappan, Vol. 80, No. 6
- 1995 Elementary Linear Algebra, 4th Ed., Venit and Bishop (1st Ed. in 1981)
- 1991 Panel Member for Session on Preparation of High School Mathematics Teachers, Southern California Section of the MAA.
- 1989 "Note on Noetherian Filtrations" (with Petro, Ratliff, and Rush); Communications in Algebra, Vol. 17, No. 2.
- 1986 "Classifying Row-Reduced Echelon Matrices", (with S. Venit); College Mathematics Journal, March, Vol. 17, No. 2.
- 1985 "The Effects of Computer Science on Mathematics Departments"; invited address to annual joint meeting of AMS/MAA, Anaheim.

Jaime Escalante: America's Best Teacher

In the 1980s, Jaime Escalante, a math teacher at Garfield High School in East Los Angeles, successfully guided hundreds of his students—children of day laborers, seamstresses, and house cleaners—to pass the AP Calculus test. Many of them went on to achieve remarkable success in colleges, including MIT, Harvard, Yale, Berkeley, UCLA, and USC, and later in their careers.



Jaime Escalante: America's Best Teacher



1/8 Vice President George H.W. Bush answers questions from students during a visit to Garfield High School in East Los Angeles on May 5, 1988. Bush is wearing a jacket presented to him by Escalante. (Douglas C. Pizac / Associated Press)

The Escalante Miracle Impacted the Mars Mission

EYEWITNESS NEWS abc 7



By [Eric Resendiz](#) abc 7

Tuesday, February 23, 2021

An East LA native, who was once a student of Jaime Escalante, plays an integral part in the Mars mission.

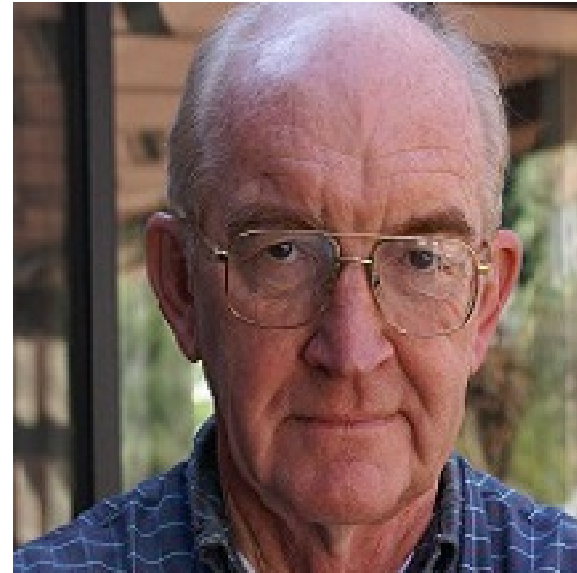
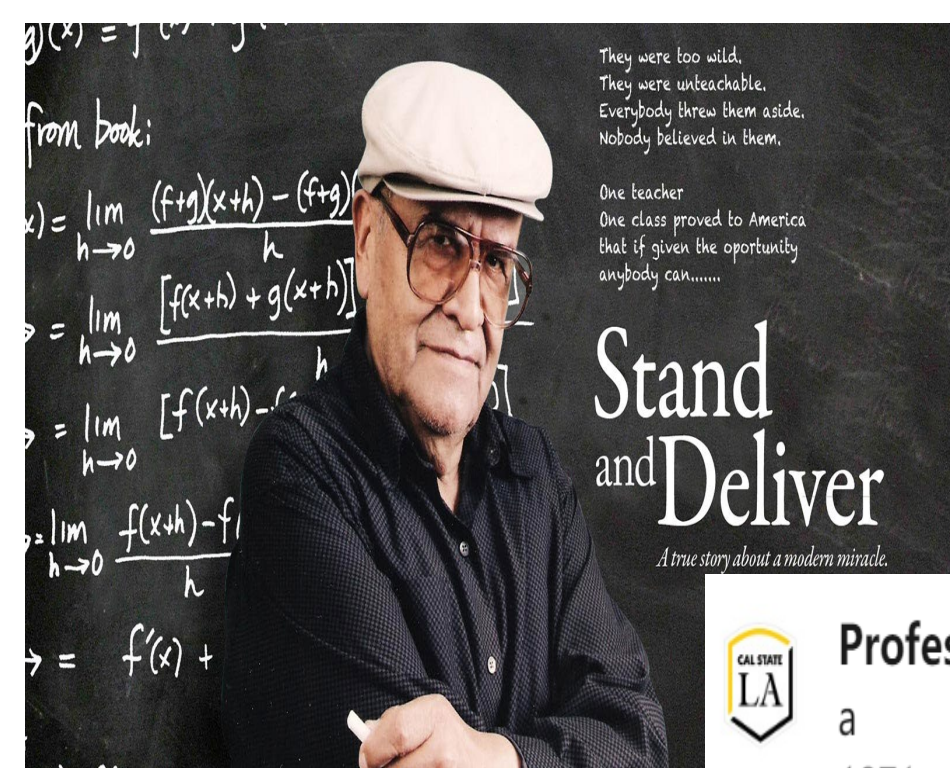
EAST LA NATIVE, JAIME ESCALANTE'S STUDENT LEADS TEAM IN NASA'S SUCCESSFUL LANDING OF PERSEVERANCE ROVER ON MARS



The Escalante Miracle Impacted the Mars Mission



Wayne Bishop: The Math Warrior Who Helped Jaime Escalante Stand and Deliver



Wayne Bishop, former Chair of the Department of Mathematics at CSU Los Angeles, was a teacher and mentor to Jaime Escalante.



Professor of Mathematics

a

1971 - Present · 52 yrs 3 mos

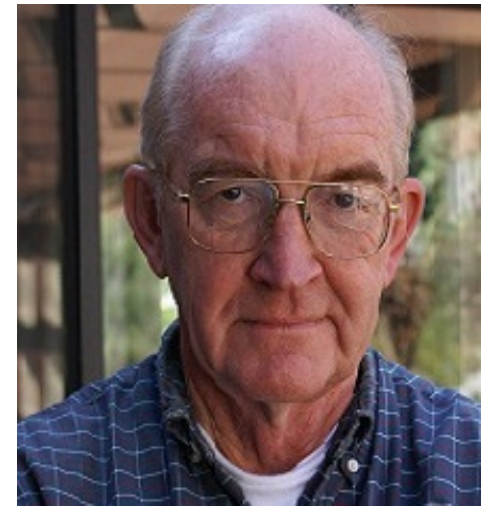


Teaching nearly all of the undergraduate classes and graduate Abstract Algebra. Many terms of Principal Undergraduate Advisor as well as several as Associate Chair and Chair of the department. One famous student, Jaime Escalante of "Stand and Deliver" well-merited fame with lifetime mutual admiration with me as "my tee-cher" and guest of honor at the premiere of the movie.

Wayne Bishop: The Math Warrior Who Helped Jaime Escalante Stand and Deliver

[Stand and Deliver Revisited](#), By Jerry Jesness, 2002

- Conventional pedagogical wisdom holds that the poor, the disadvantaged, and the **"culturally different"** are a fragile lot, and that the academic rigor usually found only in elite suburban or private schools would **frustrate them, crushing their self-esteem**. The teachers and administrators that I interviewed did not find this to be true of Garfield students.
- **Wayne Bishop**, a professor of mathematics and computer science at California State University at Los Angeles, notes that Escalante's top students generally did not attend Cal State. Those who scored fours and fives on the A.P. calculus tests were at schools like MIT, Harvard, Yale, Berkeley, USC, and UCLA. For the most part, Escalante grads who went to Cal State-L.A. were those who scored ones and twos, with an occasional three, or those who worked hard in algebra and geometry in the hope of getting into calculus class but fell short.
- **Bishop observes that these students usually required no remedial math, and that many of them became top students at the college. The moral is that it is better to lose in the Olympics than to win in Little League, even for those whose parents make less than \$20,000 per year.**



Wayne Bishop, former Chair of the Department of Math/CS at CSU Los Angeles, was a mentor to Jaime Escalante. He was publicly honored by Escalante at the premiere showing of *Stand and Deliver*.

Wayne Bishop Denounces Deficient Math Textbooks as “Immoral,” Urges Upholding Upward Mobility through Rigorous Education for All

<https://www.nychold.com/let-bishop-020312.html>



To Ms Colaizzi and the Pittsburgh Public Schools BoE

March 12, 2002

By Wayne Bishop, California State University at Los Angeles

- Although such absolutes are hard to substantiate objectively, it is possible that this is the worst high school mathematics curriculum that has ever been written...**districtwide approval of IMP (Interactive Math) would be nothing short of immoral.** **The opportunity of upward mobility through education lost for thousands of children.**
- Better to use the old dog-eared mathematics books, buy a few for replacement if needed, and continue to educate the college bound appropriately, **independent of their gender, race, or family background. Male/female, black/white/Hispanic/Asian, rich/poor, etc., are all irrelevant.** If money is available, use it to replace the elementary school curriculum, *Everyday Mathematics*, that is helping to make your secondary problem worse, not to buy and to train teachers for IMP. Mathematics is mathematics. IMP is not.

Wayne Bishop Fought Against the Racism-based Reform Math

Wayne Bishop:

- Better to use the old dog-eared mathematics books, buy a few for replacement if needed, and continue to educate the college bound appropriately, independent of their gender, race, or family background. Male/female, black/white/Hispanic/Asian, rich/poor, etc., are all irrelevant.

Math Reformers :

- A fundamental aim of this framework is to respond to issues of inequity in math learning. **The belief that “I treat everyone the same” is insufficient. A “color-blind” approach allows systemic inequities to continue.**

Wayne Bishop: A Leader and Warrior in the "Math Wars" from the 1990s to the Present

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MR. SECRETARY, WE ASK THAT YOU WITHDRAW YOUR PREMATURE RECOMMENDATIONS FOR MATHEMATICS INSTRUCTION

AN OPEN LETTER TO UNITED STATES
SECRETARY OF EDUCATION
RICHARD RILEY

Dear Secretary Riley:

In early October of 1999, the United States Department of Education endorsed ten K-12 mathematics programs by describing them as *exemplary* or *promising*. There are five programs in each category. The *exemplary* programs announced by the Department of Education are: Cognitive Tutor Algebra; College Preparatory Mathematics (CPM); Connected Mathematics Program (CMP); Core-Plus Mathematics Project; Interactive Mathematics Program (IMP). The *promising* programs are: Everyday Mathematics; MathLand; Middle-school Mathematics through Applications Project (MIMAP); Number Power; The University of Chicago School Mathematics Project (UCSMP).

The Expert Panel that made the final decisions did not include active research mathematicians. Expert Panel members originally included former NSF Assistant Director, Luther Williams, and former President of the National Council of Teachers of Mathematics, Jack Price. For the current list, see the web site below. It is not likely that the mainstream views of practicing mathematicians and scientists were shared by those who designed the criteria for selection of *exemplary* and *promising* mathematics curricula. For example, the strong views about arithmetic algorithms expressed by one of the Expert Panel members, Steven Leinwand, are not widely held within the mathematics and scientific communities. In an article entitled, "It's Time To Abandon Computational Algorithms," published Feb. 9, 1994, in *Educative Week on the Hill*, he wrote:

"It's time to recognize that, for many students, real mathematical power, on the one

side, is to acknowledge that continuing to teach these skills to our students is not only unnecessary, but counterproductive and downright dangerous."

In sharp contrast, a committee of the American Mathematical Society (AMS), formed for the purpose of representing the views of the AMS to the National Council of Teachers of Mathematics, published a report which stressed the mathematical significance of the arithmetic algorithms, as well as addressing other mathematical issues. This report, published in the February 1998 issue of the *Notes of the American Mathematical Society*, includes the statement:

"We would like to emphasize that the standard algorithms of arithmetic are more than just ways to get the answer—that is, they have theoretical as well as practical significance. For one thing, all the algorithms of arithmetic are preparatory for algebra, since these are (again, not by accident, but by virtue of the construction of the decimal system) using analogies between arithmetic of ordinary numbers and arithmetic of polynomials."

Even before the endorsements by the Department of Education were announced, mathematicians and scientists from leading universities had already expressed opposition to several of the programs listed above and had pointed out serious mathematical shortcomings in them. The following criticisms, while not exhaustive, illustrate the level of opposition to the Department of Education's recommended mathematics programs by respected scholars:

Richard Askey, John Bascom Professor of Mathematics at the University of Wisconsin at Madison

criticized *Geometry Mathematics Program* entirely omits the important topic of division of fractions. Professor Askey's paper was presented at the "Conference on Curriculum Wars: Alternative Approaches to Reading and Mathematics" held at Harvard University October 21-22, 1999. His paper also identifies other serious mathematical deficiencies of CMP.

R. James Milgram, professor of mathematics at Stanford University, is the author of "An Evaluation of CMP," "A Preliminary Analysis of SAT-I Mathematics Data for IMP Schools in California," and "Curriculum Analysis for Core Plus Students at Andover High School: One Year Later." This latter paper is based on a statistical survey undertaken by Gregory Bachels, professor of mathematics at Wayne State University. Each of these papers identifies serious shortcomings in the mathematics programs: CMP, Core-Plus, and IMP.

Martin Schirlemann, while chairman of the Department of Mathematics at the University of California at Santa Barbara, wrote an open letter deeply critical of the K-6 curricula MathLand, identified as *promising* by the U. S. Department of Education. In his letter, Professor Schirlemann explains that the standard multiplication algorithm for numbers is not explained in MathLand.

Betty Tsang, research physicist at Michigan State University, has posted detailed criticisms of the Connected Mathematics Project on her web site.

Hung-Hai Wu, professor of mathematics at the University of California at Berkeley, has written a general critique of these recent curricula ("The mathematics education reform: Why you should be concerned and what you can do," *American Mathematical Monthly* 104(1997), 946-954) and a detailed review of one of the *exemplary* curricula, IMP ("Review of Interactive Mathematics Program

While we do not necessarily agree with each of the criticisms of the programs described above, given the serious nature of these criticisms by credible scholars, we believe that it is premature for the United States Government to recommend these ten mathematics programs to schools throughout the nation. We respectfully urge you to withdraw the entire list of *exemplary* and *promising* mathematics curricula, for further consideration, and to announce that withdrawal to the public. We further urge you to include well-respected mathematicians in any future evaluation of mathematics curricula conducted by the U.S. Department of Education. Until such a review has been made, we recommend that school districts not take the words *exemplary* and *promising* in their dictionary meanings, and exercise caution in choosing mathematics programs.

Sincerely,

David Klein
Professor of Mathematics
California State University, Northridge

Richard Askey
John Bascom Professor of Mathematics
University of Wisconsin at Madison

R. James Milgram
Professor of Mathematics
Stanford University

Hung-Hai Wu
Professor of Mathematics
University of California, Berkeley

Martin Schirlemann
Professor of Mathematics
University of California, Santa Barbara

Professor Betty Tsang
National Superconducting Cyclotron Lab.
Michigan State University

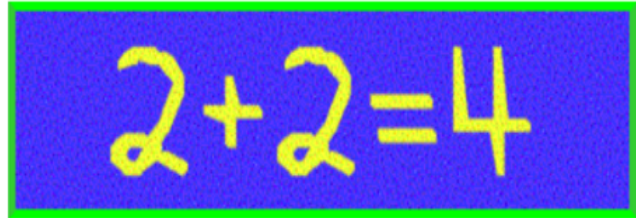
Wayne Bishop was one of the leaders in the "math wars" that spread from coast to coast in the 1990s.

On November 18, 1999, 220 leading mathematicians and scientists, including seven Nobel Laureates and Fields Medalists, issued an open letter to protest against the deficient math textbooks recommended by the US Department of Education to nationwide school districts. Wayne Bishop was one of the signers.

<http://www.csun.edu/~vcmath00m/riley.html>

Wayne Bishop: A Leader and Warrior in the “Math Wars” from the 1990s to the Present

Mathematically Correct



"There is a mathematically correct solution"

This web site is devoted to the concerns raised by parents and scientists about the invasion of our schools by the [New-New Math](#) and the need to restore basic skills to math education.

Mathematically Correct is the informal, nationwide organization that fights the Establishment on behalf of sanity and quality in math education. -- David Gelernter, NY Post

<http://www.mathematicallycorrect.com/>

An excerpt from David Klein's "A Brief History of American K-12 Mathematics Education in the 20th Century" :

The founders of **Mathematically Correct** had credentials in science and mathematics that could not easily be dismissed. Gipson was a professional engineer; Clopton a statistician working for the Department of Veterans Affairs in San Diego; Schwartz was finishing up a Ph.D. in geophysics; McKeown was a faculty member at the Salk Institute for Biological Studies in San Diego. They were soon joined by others, notably Wayne Bishop, a professor and former chair of the Mathematics Department at California State University, Los Angeles, and Frank Allan, a former president of the NCTM. Both had many years of experience dealing with mathematics education issues, and both were critics of the 1989 NCTM Standards.

Wayne Bishop: A Leader and Warrior in the “Math Wars” from the 1990s to the Present

An excerpt from David Klein’s “A Brief History of American K-12 Mathematics Education in the 20th Century” :

- An early example was the participation of Professor Wayne Bishop on a Mathematics Task Force formed by the state Superintendent of Schools, Delaine Eastin, in 1995. The 25 member Task Force was charged with recommending ways to improve mathematics instruction in California. Bishop publicly resigned from the Task Force in order to make known his disagreement with the weak recommendations the Task Force was making.

Other Objective Studies Have Shown the Poor Results of Reform Math

A study published by William Hook , Wayne Bishop and John Hook, in the *Educational Studies in Mathematics* demonstrated that in California the switch from a reform math program to one reflecting the curricula of leading math nations resulted in a stunning increase in student performance.



Math Education: A University View



David Preston

838 subscribers

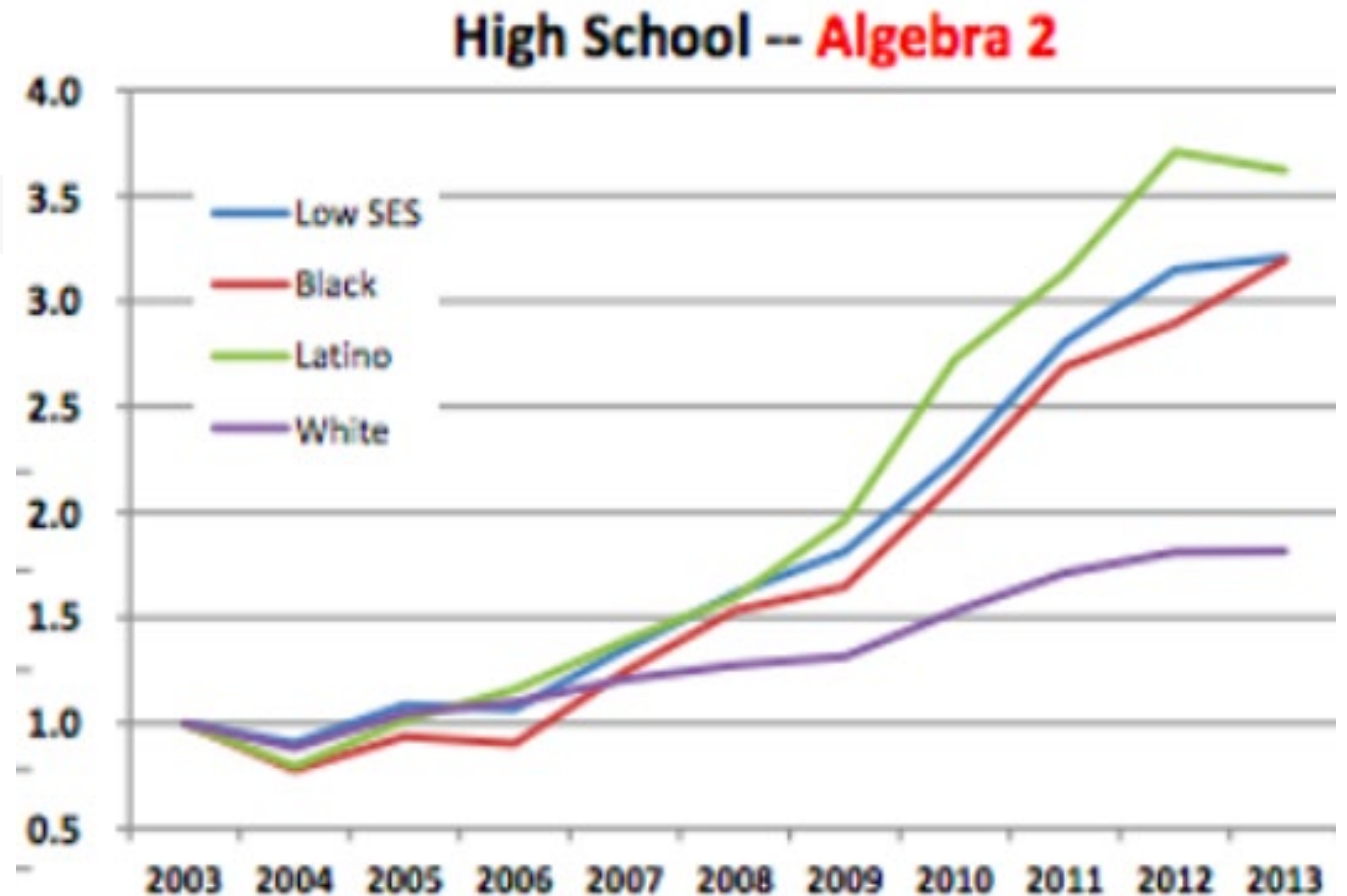


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Wayne Bishop: A Leader and Warrior in the “Math Wars” from the 1990s to the Present

In the late 1990s and early 2000s, mathematicians and parents achieved remarkable success in fighting off the Reform Math textbooks, leading to significant improvements in math performance by California students, especially disadvantaged students, in the pre-Common Core era.



Wayne Bishop: A Leader and Warrior in the “Math Wars” from the 1990s to the Present

A Close Examination of Jo Boaler’s Railside Report

Wayne Bishop, Paul Clopton, R. James Milgram

Abstract—Jo Boaler, an Associate Professor at the Stanford School of Education has just published an already well known study of three high schools that she called Hillside, Greendale, and Railside. This study makes extremely strong claims for discovery style instruction in mathematics, and consequently has the potential to affect instruction and curriculum throughout the country.

As is the case with much education research of this nature, Prof. Boaler has refused to divulge the identities of the schools to qualified researchers. Consequently, it would normally be impossible to independently check her work. However, in this case, the names of the schools were determined and a close examination of the actual outcomes in these schools shows that Prof. Boaler’s claims are grossly exaggerated and do not translate into success for her treatment students. We give the details in the following article.

most controversial of the deeply held beliefs of this country’s education schools about mathematics education.

The study followed the cohort of students at each school that started ninth grade in 2000, used a non-standard set of four tests, interviews, and a number of group projects to determine the mathematical competency of these students. The students at two of the schools were said to have been taught mathematics using mainly “traditional methods,” but the students at the third were supposed to have been taught using “reform methods” with group learning and detracking, based largely on CPM,³ a high school mathematics curriculum developed at the University of California, Davis.

The third school, which was called Railside in the study,

Why Do Americans Stink at Math? Some of the Answer.

Wayne Bishop, PhD
Mathematics, California State University LA

On July 23, 2014, a lengthy and persuasive article appeared in the *New York Times Magazine* written by the author as an introduction to her new book by the same eye-catching name:

Why Do Americans Stink at Math?

Elizabeth Green

<http://www.nytimes.com/2014/07/27/magazine/why-do-americans-stink-at-math.html>

Ms. Green's basic premise is that somehow Japanese classrooms modified their style from the purportedly traditional approach of rote response and memorization of meaningless algorithms to the American style of teaching mathematics following the National Council of Teachers of Mathematics (NCTM) *Standards*. Unfortunately, her article - and, presumably, book - represent so much education industry misinformation that it almost cries out for clarification/correction. Herein is an attempt toward that end. It is far from complete but I will try to cover the high points. In summary, Ms. Green has referenced much of the same source material as mentioned herein but a deeper look at those sources leads to quite a different interpretation of the past and, more importantly, implications for trying to improve performance in mathematics in many American precollegiate schools. For the record, there are many American precollegiate schools with exemplary mathematics performance.

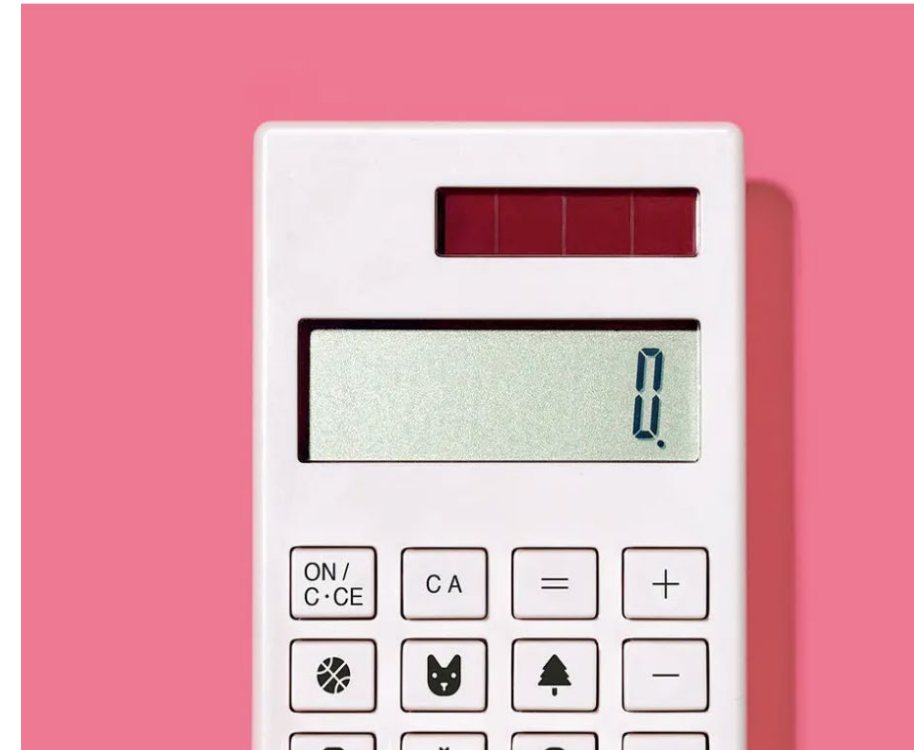
The New York Times Magazine

Why Do Americans Stink at Math?

Share full article



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Wayne Bishop Warns Against the PISA Flaws and the Finland Education Mirage

Nonpartisan Education Blog
education policy

<https://nonpartisaneducation.org/blog1/2017/01/significance-of-pisa-math-results/>

**5 Countries
Lower Average
Achievement**

Finland, Germany,
Kuwait, Netherlands,
Saudi Arabia

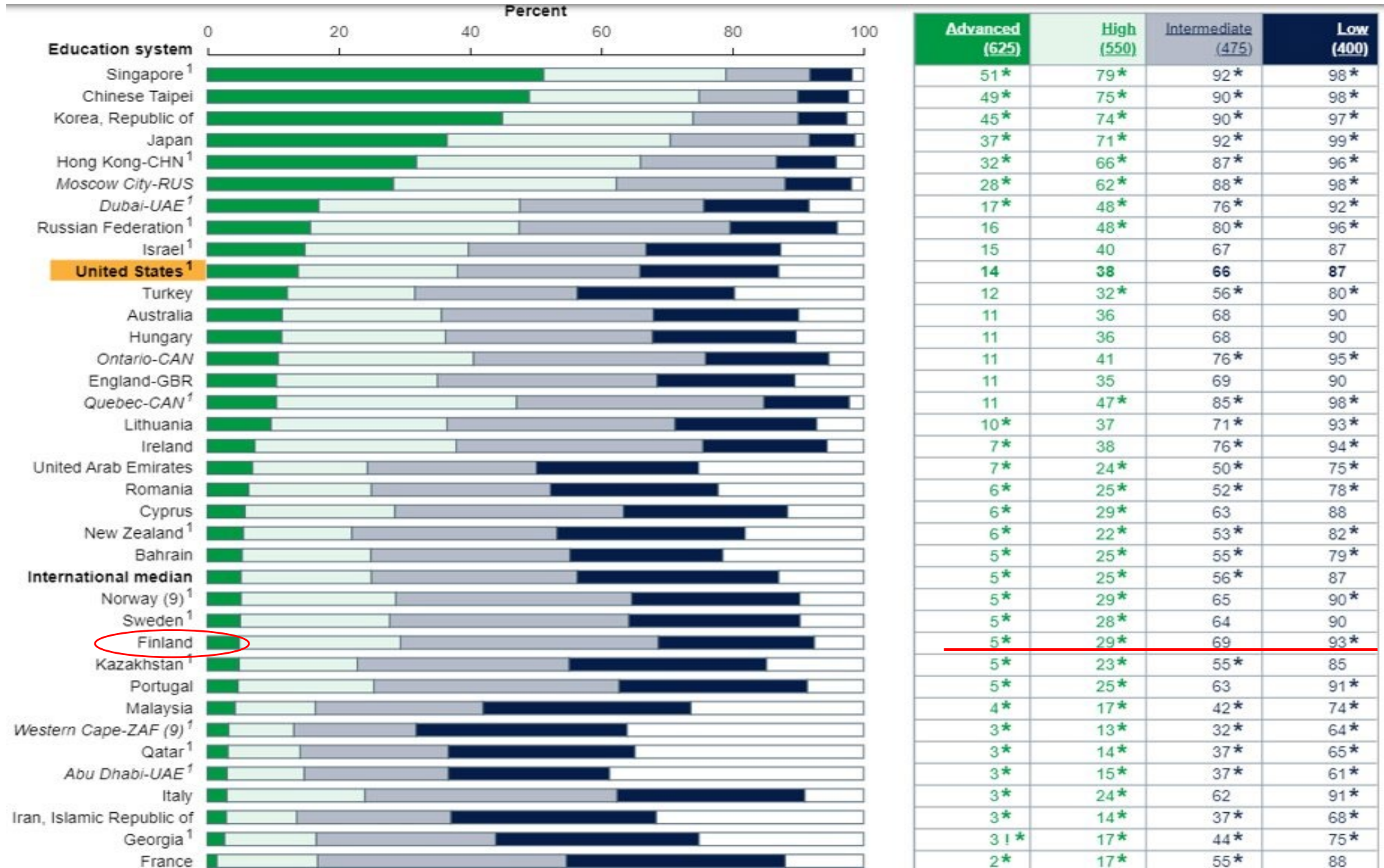


Significance of PISA math results

Posted on [2 January, 2017](#) by [Wayne Bishop](#)

A new round of two international comparisons of student mathematics performance came out recently and there was a lot of interest because the reports were almost simultaneous, TIMSS[[1](#)] in late November 2016 and PISA[[2](#)] just a week later. They are often reported as 2015 instead of 2016 because the data collection for each was in late 2015 that would seem to improve the comparison even more. In fact, no comparison is appropriate; they are completely different instruments and, between them, the TIMSS is the one that should be of more concern to educators. Perhaps surprising and with great room for improvement, the US performance is not as dire as the PISA results would imply. By contrast, Finland continues to demonstrate that its internationally recognized record of PISA-proven success in mathematics education – with its widely applauded, student-friendly approach – is completely misinforming.

The Finland Education Miracle: Mirage or Reality?



Letters from Mathematicians

<https://www.nonpartisaneducation.org/Review/Resources/LettersFromMathematicians.pdf>

Letters from R. James Milgram and Wayne Bishop to Ling Huang, a Chinese parent from the Palo Alto school district, on the deterioration of K-12 math education.

1. Re: A Chinese parent's thought on PAUSD math education
2016-12-17 07:57
From: Bishop, Wayne

Dr. Milgram has changed his email address (on the Cc list) and I have taken the liberty of including a copy of your excellent critique for his and your convenience. I am sure that he will enjoy reading it although, along with me, will not be surprised. **The situation here in the US has been bad for decades but has gotten much worse over the years and, outrageously, this decline has been led by a mathematics education industry that simply does not understand mathematics. They do not seem to realize the importance of logically oriented work that speaks for itself in terms of understanding and opens doors for deeper study of mathematics. For example, the Stanford (education) professor in charge of the following website has rockstar status among the mathematics education community: <https://www.youcubed.org/>**

Your description of how much farther ahead Chinese students are then here is reminiscent of that of my daughter-in-law, a Korean immigrant at 5th grade decades ago. She came in speaking almost no English and was in an immersion English situation. From competition in Korea, she knew she was nothing special in mathematics (eventually majored in English literature!) but she was a couple years ahead of her classmates here. That was a real boon because helping fellow students with their math both improved her English and boosted her self-esteem. Within a year or two, she was caught up in grade-level, academic English.

9. Re: Re: advice needed on math education
2017-01-09 08:16

From: Bishop, Wayne

Push the Math in Focus; it is from Singapore albeit not nearly as good as the great Primary Math Series that remains popular with some strong private schools and homeschoolers. **Singapore (Maybe every country? Japan went through it) suffers from the influence of "professional" mathematics education, people whose math skills are so poor that they do not recognize that a logically presented, step-by-step approach to solving a problem represents all the understanding of the situation possible at that stage of the child development. Too much unguided discovery is far too frustrating to develop the power inherent in a competent mathematics "toolbox" and lots of nonsense explaining their understanding actually gets in the road.**

Wayne

Wayne Bishop had been a leader and warrior in the "math wars" from the 1990s onwards. A severe bike accident in 2007 left him disabled, but Bishop continued to write about K-12 math education using voice-typing tools, taught at CSU Los Angeles, and actively participated in educational discussions toward the end of his life. **He was an unsung hero, an iron man.**



Starry, Starry Night

-- to mathematicians who have fought their whole lives to salvage U.S. K-12 math

Starry, starry night
Paint your palette blue and gray
Look out on a winter's day
With eyes that know the darkness in my soul

You lamented about the absurdity
Leading astray U.S. K-12 math
You anguished over the fads
That caused the math-science death march

Now I understand
What you tried to say to me
And how you suffered for your sanity
And how you tried to set them free

They would not listen, they're not listening still
Perhaps they never will...



The Road Not Taken by Johnny Who Flunks Math

Two roads diverged in a yellow wood,
And sorry Johnny could not travel both.
And be one curious kid, long Johnny stood,
And looked down both as far as he could.

One guided by mathematicians, who urge
Rigor, focus, and coherence.
Additions, subtractions, multiplication tables, and long divisions;
Ratios, rates, percentages, and proportions.
Paper-and-pencil algorithms,
Steadily sharpen your thoughts.
Practice dispels anxiety, and practice grows knacks;
Fears fade away; confidence can thrill.
Knowledge is power, and you earn it with sweat.

The other favored by educationists, who chant
A child-friendly wonderland:
Story-telling, fingerplays, and diagram visuals,
Geometric slides, turns, and flips.
Let calculators do the chores,
And sweetie you are for creativity.
Practice causes anxiety, and practice makes you a nerd.
Multiplication tables numb your brains,
Multiple ways for five times ten are the magic.
Spiraling through the K-12 woods, and you gain
Critical thinking, problem-solving, and higher-order thinking.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and Johnny—
Johnny took the one guided by educationists,
And that has made all the difference.

