

The following is a collection of letters from mathematicians R.James Milgram (Jim) and Wayne Bishop to a parent of the Palo Alto School District, California.

R.James Milgram:

- Since 1969: Professor of Mathematics (Emeritus since 2010), Stanford University
- 1989: Gauss Professorship at the 100th anniversary of Gauss's death, University of Göttingen. Only three mathematicians had been awarded the Gauss Chair for the last 40 years.
- 1991-1994: Member, American Mathematics Society (A.M.S.) Editorial Boards Committee.
- 1997: Together with Gunnar Carlsson, Ralph Cohen, and Steve Kerckhoff, revised the California Mathematics Standards under the direction of and for the California Board of Education.
- 1998: Together with H.-H. Wu, Dept. of Mathematics, Berkeley, revised and rewrote most of the California Mathematics Framework under the direction of and for the California Board of Education.
- 1999: Member, Content Review Panel of Textbooks in Mathematics, for the California Partial Textbook Adoption.
- 2000: Testified Before the Committee on Education and the Workforce of the Congress of the United States on the effects of programs funded by the National Science Foundation.
- 2000 -: Editor, Homology, Homotopy and Applications, Member, National Science Foundation Panel on Mathematics and Robotics, May, 2000.
- 2000: Distinguished Visiting Professor, Chinese Academy of Sciences, Beijing.
- 2004: Member NSF advisory panel on the mathematics that students need to know, with Richard Schaar, Deborah Ball, Joan Ferrini-Mundy, J. Kilpatrick, and Wilfried Schmid. This led to the COMMON GROUND document which attempted to bridge the gap between math educators and professional mathematicians.
- 2005-2009: member of NASA Advisory Council.
- 2005-2008: Member, Board of Directors of the National Board for Education Sciences.
- 2007-2009: Achieve Committee on updating the ADP Mathematics Standards.
- 2009-2010: NGA/CCSSO Validation Committee for ELA and Mathematics Core Standards.
- 2009-2010: Member, American Mathematics Society (A.M.S.) Committee on Committees.
- 2009: appointed as one of the original members of the Common Core Standards' Validation Committee.
- 2010: Colloquium Lecture in Mathematics Education, Teachers College.
- 2011-2012: Main consultant for revision of Texas Mathematics Standards.
- 2013: Plenary Lecture on Mathematics Education, Calgary University, Alberta, Canada.
- 2013: Presentation to the school boards for Santa Clara County, California.

- 2014: Main consultant for new Indiana Mathematics Standards.

Wayne Bishop:

- Emeritus professor and former Chair of Math and Computer Science Department, California State University Los Angeles;
- Former member/panelist/advisor of: Advisory Panel to California Commission on Teacher Credentialing; Mathematics Task Force, State of California; California Assembly Hearings on Mathematics Education; Content Review Panel, California Approval of Mathematics Textbooks; the Core Knowledge Foundation;
- Interviewed by CNN and ABC Nightly News with Peter Jennings on math education;
- Role model of the legendary math teacher Jamie Escalante.

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.

You mentioned the horrible US performance on the recent PISA. You should be aware that this test (by design) has serious limitations and is highly

misleading. Bad as the US math performance is, it is much better than some of the nations that scored far higher; e.g., Finland and the Netherlands (13 and 11 vs. our 41). The problem is that PISA is not even at a decent algebra level much less a performance level appropriate for 15-year-olds interested in math-based (STEM) careers. A far better international comparison that, by coincidence, came out at almost the same time is TIMSS:

<http://timss2015.org/timss-2015/mathematics/student-achievement/distribution-of-mathematics-achievement/>

The Advanced level all TIMSS is not comparable with the PISA result that assesses all 15-year-olds on arithmetic-level everyday applications. Singapore scores highest on all of them that has been recognized in the US (by people with eyes to see) and an earlier version of its math curriculum, Singapore Primary Math Series, is a popular choice among homeschoolers and academically oriented private schools.

Thanks for sending this to me. Do I have permission to share it publicly with others?

Wayne

2. Re: A Chinese parent's thought on PAUSD math education

2016-12-17 10:04

From: R.James-Milgram

Wayne Bishop is quite correct that what you say is something I'm very familiar with, and I fully agree with your conclusions. **However, I think the difference between what goes on in the better areas of China and here is even greater than you believe.**

I am aware of the relatively recent addition of the new course on "algorithms" to the lower high school curriculum (really a course on computers and computer programming).

China is the only country that I'm aware of that has added a real "math in the 21st century" course to their curriculum, and from what I can find out it is very, very successful.

I do have one question though. **Is it true that PAUSD is still using the really terrible Everyday Math curriculum?**

Yours,

Jim Milgram

3. Re: A Chinese parent's thought on PAUSD math education

2016-12-17 14:25

From: Bishop, Wayne

I had already looked it up but I still don't know. According to the district website, they do use Everyday Math in the elementary years but from the scanned pages in her report, they are using Engage Math. Maybe just a supplement? Not that it is not much better; that is the New York curriculum designed by Scott Baldridge. He is a real math guy and good but he has been less than thrilled with much of the implementation. I did not see any detail in regard to the middle school but the secondary program looks very traditional; I did not see CPM or any other so-called integrated math.

Wayne

4. Re: A Chinese parent's thought on PAUSD math education

2016-12-18 08:46

From: R.James-Milgram

As usual, I have no argument with what you say, **but for parents the main thing has to be protecting their own children from the effects of our public schools.**

In particular, I do not, at all, regard PAUSD as a top rated school system. Instead, it is an exact copy of the IDEAL system promulgated by our schools of education whose sole focus is on something called EQUITY. When I was young, this meant that every student should have the opportunity to learn what they could in any area they were interested in. It did not mean that all students would be equally successful.

However, today it does mean that the objective is that all students come out equal, which, in practice, means that all students come out with a minimal level of basic knowledge and nothing more.

So, given that the major reason for the absurdly high real estate values in Palo Alto is **the fiction that PAUSD is one of the top school districts in the country**, it is essential to most aware parents that they AUGMENT what the district teaches for their kids. **But the realistic and practical parents know better than to even try to improve the system in K-12. Long experience has shown that this is a waste of time and energy.**

I am fully aware of the difficulty many parents have with the fact that if their children's friends parents are not aware of the need for augmentation then those children will have much diminished futures. **But even if they could force changes in the system, it would take so long to implement**

them that their children and their children's friends will have graduated before any of the essential changes would have even been implemented.

I am also aware that **if all you were to do is augment what your children are learning, then they will score quite high on the yearly tests, and the school will appear to be working very well.** However, what we recommend is that parents who augment what their children are learning in PAUSD **OPT THEM OUT** of those tests. There are forms out there that need to be filled out to do this, but you should be easily able to find out what you need to know on the internet.

One more thing:

Have you met Liping Ma, Principal of the Sitanfu Chinese School in Palo Alto? We worked together extensively about 10 years back, and I have the highest regard for her knowledge of the US and Chinese educational systems.

This was during the time when I still felt it was possible to change what is happening in our schools via parental pressure and action. I no longer feel that this is realistic.

Instead, I believe that we have to wait for the failures of the system to become so clear that it is no longer possible to ignore them. It may very well be the case that this will only occur when our economy starts to fall apart, but I see no real way of avoiding this.

Yours,
Jim Milgram

5. Re: A Chinese parent's thought on PAUSD math education

2016-12-18 16:52

From: Bishop, Wayne

Interesting article on the subject of our nation's lack of challenge to high-performing students. I am sure we do not do nearly enough for them but I am convinced that we don't begin to develop the talent of far too many students to the point where we even could accurately identify who those exceptional students are. **The article is by one of the best known education writers in the country, Jay Mathews of the Washington Post,** and refers to the results that Jaime Escalante had back in the 80s with a low socioeconomic, heavily Hispanic high school. At the height of his career there, he had the 4th in the nation most students receiving nationally tested college credit for calculus (too monkey-see/monkey-do calculus for credit at schools such as Jim's Stanford but a huge game changer in the lives of those students and for credit at mine) and. Mathews wrote a book about it "Jaime Escalante, Best Teacher in

America" and the movie "Stand and Deliver" was made about one of the first years when the program was just getting started.

https://www.washingtonpost.com/local/education/states-need-to-do-better-by-their-most-talented-students/2016/12/11/d7618158-b059-11e6-840f-e3ebab6bcdd3_story.html?mc_cid=b8858e7a82&mc_eid=d9d84a7fcd&utm_campaign=b8858e7a82-20160918_LateLateBell9_16_2016&utm_medium=email&utm_source=Fordham%20Updates&utm_term=.6c74272964cc

In the Comments that follow Mathew's article, one person asserts the following that Mathews then challenges (does not deny but questions for evidence) the assertion and I'm sure I do not know but you do as China is one of those countries with recognized high-performance and you have written to show us why most students do far better:

"But understand that all of the countries that outperform the US track their students and focus grooming their best and brightest. Which is the opposite of our current system."

My assumption is that there are highly competitive examinations at some key point(s) that determine future opportunities but that the system does not otherwise "track the students and focus on grooming their best and brightest."

What is the situation where you lived in China and, if competitive exams to advance academically are given, at what level(s) are they given and what options are available to those who do not meet certain cutoff levels?

I have communicated with Jay Mathews for a couple decades and would like to bring him into this conversation. Do I have permission to pass along your article to discuss the situation directly?

6. Re: Most Talented Students - WaPo

2016-12-19 08:14

From: Bishop, Wayne

To: Jay Matthews

I enjoyed your article; it addresses a long-standing concern of mine in publicly-funded US education. We faced it decades ago with no resolution possible in Pasadena Unified; **even the so-called gifted program was of little help and we wound up in an academically oriented private school after 1st Grade** because, in the words of his 1st Grade school principal concerned about his future, "He needs a peer group" and, by implication, Pasadena Unified could not provide one. **Heterogeneous grouping uber alles; excellence be damned (except for football and other such things that matter).** Within a few weeks, High Point Academy bumped him from 2nd to 3rd in order to be better challenged and he never looked back. Wonderful support at Princeton for his PhD and now professor of

chemistry and biochemistry at Amherst College. A black kid with uneducated and poor parents from west Pasadena? No such opportunity.

One of the Comments following your article spoke of the Chinese practice of grooming the very best students academically and you wondered aloud if they really are so selected (as with potentially Olympic athletes, say). Coincidentally, a frustrated Chinese parent in Palo Alto schools sent the attached description to Stanford's Jim Milgram and myself for our consideration. Her response to my question about yours is below; she doesn't seem to know if the truly outstanding students are so selected but ordinary high-performing students are clearly challenged by the system, their parents, and themselves in a highly competitive environment that would have allowed my son - and that black kid from west Pasadena - the same opportunity at public expense.

Such a situation is not allowed, of course; it is viewed as "discriminatory" because any such program would not have equality of outcomes, the child's background and environmental influences are (statistically speaking) too strong. True as it is that my son would have had a better chance than that westside black kid, **the fact is that our egalitarian goals guarantee that he - along with tens of thousands of others across the country - has no chance at all.**

As points out below, the Chinese environment is too heavy to be healthy for most children but ours is overwhelmingly too light to a point where the educational opportunity of bright well-prepared kids can be killed by the school environment - even by sheer boredom is not much worse - instead of being stimulated by it. A real tragedy that needs even more attention from your pen. I heard a rumor that you are semi-retired and have moved back to Pasadena. Is that right? Anyway, **thanks for keeping up some discussion of the issue that our schools of education and pandering politicians refuse to acknowledge.**

Wayne

7. Re: advice needed on math education

2017-01-08 10:42

From: R.James-Milgram

Investigations Math is one of the WORST SERIES OUT THERE. You've got a major problem on your hands, I'm afraid. It is also known as TERC and was one of the major problem series that we had to deal with in the 1990's.

We managed to essentially get rid of it in California and a number of other states, and the comments I've heard about the new version

agree that it's at least as terrible as the original.

Please send my remark above to anyone you think might be interested.

And yes, feel free to acknowledge my help.

I'll try to comment on your article as soon as I can. But, the storm you are dealing with on the Peninsula is quite a bit worse in the Santa Cruz mountains where I live. People have said 10 or more inches could very well have fallen by tomorrow.

Jim Milgram

8. Re: advice needed on math education

2017-01-08 15:05

From: Bishop, Wayne

No surprise but I agree with everything Jim said. Although approved for California back in the early 90s (as Dale Seymour), it was a distant 3rd in statewide adoptions vs. MathLand and Quest 2000 (that never found it; it had died before 2000). **Most districts considered it to be way too far in that direction but now it is back with a vengeance. Use my name in any way that useful** but your document came up locked so I couldn't read your new draft.

Wayne

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

10. Re: advice needed on math education

2017-01-16 08:27

From: R.James-Milgram

Actually, between 1998 and 2010, the parents and the "math professors" won nearly every battle, and there were any number of states where real data showed vast improvements in student math outcomes. Particularly true in California where the 1998 math standards (written primarily by actual mathematicians) were dramatically changing student expectations, so that fully 60% of students expected to start algebra in seventh or eighth grade, and be in a position to take serious math courses by their last two years in high school. Another really remarkable example was Massachusetts, where their 2000 standards were written by an actual mathematician as well. By 2005 they were scoring near the absolute top internationally, just below countries like Singapore.

Still a third example was Minnesota (in mathematics, but not in ELA). And unlike the other two, Minnesota never signed on the the Math Common Core, so, even today, their results are competitive at the international level.

My reading of the situation between 2005 and 2009 was that the "dark force," the faculties of the schools of education, were getting more and more desperate.

What then happened was that vast amounts of money were pumped into the hands of people like Linda Darling-Hammond, to resurrect the influence of the schools of education from, mostly, the Bill and Melinda Gates foundation, and they were the primary funding agency for the creation of the Common Core (Math and English Language Arts) standards.

There is an entirely separate history here dating from the earliest days of the Clinton presidency where Hillary Clinton, working with Marc Tucker, Michael Cohen, and a few others, came up with the ideas underlying the Common Core, and tried to change the entire structure of the curricula of the various states, primarily in mathematics, to a common set of standards via the creation of a national exam.

Initially, this was shot down in Congress, and we thought that it had completely disappeared. But that was entirely incorrect. Mike Cohen became the head of Achieve in about 2004. This is the group that ultimately put together the details of the creation of the Common Core in

about 2007 - 2009, and Marc Tucker was one of the very small group of core leaders for both Achieve and this project. But now, the real difference was that they had virtually unlimited funding available from the Gates Foundation.

I believe that Gates was responsible for further people being added to the leadership group. Key among them was David Coleman, who, today, as president of the College Board, is effectively dismantling our advanced high school level science and mathematics courses.

Moreover, as best I can understand the hidden details, Secretary of State Hillary Clinton working closely with Obama and Secretary of Education Arne Duncan, was largely responsible for creating the "Race to the Top" funding, which provided the main leverage for forcing virtually every state in the country to join the Common Core project.

Again, as had happened in the late 1990's parent groups throughout the country protested vigorously, and they rapidly convinced quite a good number of state officials to drop their support of Common Core. However, here is the point where the power of the Gates Foundation was key in convincing these people and others in the state governments that they should keep the Common Core -- if necessary, just renaming it to things like the new "Indiana State Mathematics and ELA standards."

Yours,
Jim Milgram

11. Re: advice needed on math education

2017-01-16 19:01

From: Bishop, Wayne

Agreed, but I would express a less optimistic history nationwide but even in California. The best ever state textbook was the special adoption immediately after the CA Math Standards were approved, **11 of us including some very good people had "blackball" cancellation rights of any curriculum that didn't objectively meet the standards.** 2001 was no slouch but not as good; still a separate CRP that determined Standards-competence independently from the pedagogy types. I also served on the 2005 "interim adoption" where the 2 groups met essentially as one but with strong deference to the opinions of the CRP members (2 on each committee I think). **By the time Steve Wilson assisted in the regular adoptions of 2007,** the CRP influence was a single member of the committee for each curriculum with no special influence. Stuff that never would have gotten through ours (CPM "algebra" for example) were approved over the strong objections of the CRP member. **Meanwhile, our friend Jo Boaler only got bigger and she was already a huge mouthpiece for mathematics-free mathematics and with the coming of**

Common Core, she became its rockstar.

Wayne

12. Re: Timeline

2017-01-17 10:49

From: R.James-Milgram

Yes, the critical period where our system began to go entirely off the rails in both math and science was tied in to the development of the "new math" in the 1960's and early 1970's. The reasons were largely political in nature and were tied into the belief on the part of a large percentage of the professional math community of the time that the material then being taught in K-10 was "essentially trivial," and it would be a waste of time for a real mathematician to be involved at this very low level. So the choice of leaders for the project were selected from the many third rate mathematicians around at the time.

By contrast, the people in the old USSR selected the best and most famous mathematician there, Andrey Kolmogorov, to head up their analogous program. This USSR program became the program in China in about 1955, in Singapore around 1984, etc. and today forms the basis for virtually all the programs in the high achieving countries.

Jim Milgram

13. Re: NTCM

2017-01-22 16:40

From: Bishop, Wayne

It has become quite a production! And excellent. Trivial point maybe but I would object a little to using "innumerable" times that Jay Mathews visited Jaime Escalante's classes. **No doubt he was an avid fan, even named the book, "Jaime Escalante, Best Teacher in America" but "many" times would be better. Another avid fan was Amar Bose, the MIT electronics professor and millionaire creator of the expensive but high quality Bose Wave sound equipment. When he realized that 14 of Escalante's students were simultaneously being successful in calculus-based programs at Harvard, Yale, and MIT, he came to take a look and watched him for a week. That was enough. My contrast with some effective teachers, Escalante was VERY directive, considered himself to be the coach of the team and everyone was to follow his direction. It was not a very creative style but, at least in his hands, highly effective.**

Wayne

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14. Re: 1995 resign

2017-01-27 09:15

From: Bishop, Wayne

The Superintendent's Math Task Force was not about textbooks except in the sense that they are a function of educational philosophy and resulting standards for assessing pedagogy and curricula. In this case, it was the lack of real standards that was the problem; namely it was the heavy implementation of the NCTM Standards of 1989 that remain. **In fact, these are more non-standards than standards; they are an endorsement and implementation of an educational philosophy called Constructivism.** Lots of people involved have a specialized interpretation of Constructivism that differs trivially from what they have in mind so calling it Constructivism can draw a vehement denial response that doesn't help the discussion. Better would be to just describe it ... **far too much so-called discovery by small learning groups** - up to and including **critical group assessments done by group instead of individuals** - and **too little direct instruction.** **A huge problem is a refusal to accept individual differences in ability and industry that is death to high-performing students unless the collective bar is set too high for most of the students, especially the slower ones, so it gets set too low.**

Wayne

15. Re: 1995 resign

2017-01-27 13:08

From: R.James-Milgram

Another very important issue that is easy to ignore on first reading is a fairly subtle change in the topics covered in the algebra course. What has happened is that the original topics like quadratic equations and lots of exercises getting practice in finding the roots are suppressed, and they are replaced by much more formal topics which are treated very superficially. So the effect is that students were no longer to be responsible for learning how to do basic algebraic operations and use these for actually solving problems.

This was the situation in the mid 1990's in California, but that same restructuring of the algebra course is a key component of the Common Core, and the long term damage it is likely to cause has been hugely magnified.

Jim

16. Re: help needed: political reasons causing the derail of the new-math?

2017-03-19 15:06

From: Bishop, Wayne

From my perspective, it's less "political" as almost a religious conviction shared by very few who are knowledgeable in genuine mathematics even at the level of a beginning engineering student that has developed with the profound growth in size and influence of "professional" education over my decades since I first studied to become a high school mathematics teacher (and so taught for 3 years). The math portion of my education requirements were taught in the math department (my first introduction to SMSG, the Illinois project, and a couple others) that were strongly mathematical (for Jim, the Illinois effort reflected the Bourbaki style) that had been adopted by the teacher prep (University of Northern Iowa) school for incoming freshmen and taught by a young (mathematically solid) crusader. I was a senior when my younger brother came in as a freshman and he had no idea what he gotten himself into. Along with the rest of the family, he was generally gifted in mathematics ability but he had no idea what had hit him and was driven into majoring in history where he taught for his entire career. I inherited all of his stuff and it was useful to me. You can imagine how effective such stuff would be in the hands of ordinary middle or high school math teachers.

Regarding the egalitarian concerns, they are legitimate and have long since been recognized as such even as a slogan, "Algebra is a civil rights issue!" Not only is it true, it may be the only one where long-term change can be effectively addressed. Paying people more because of their skin color instead of their competence satisfies some bean-counters but is not inherently satisfying. One of the earliest, loudest, and most heard is Robert Moses, a guy with legitimate Civil Rights Era roots. He was a properly educated high school math teacher (New Jersey) who went south to set up one of the freedom schools and has made a career of it with The Algebra Project:

<http://www.algebra.org/>

He is gotten millions of federal dollars but decades ago was misled by that same math ed philosophy. Everybody working together having a good socially-aware time instead of the traditional training that got him where he was (with the realistic ability to choose between lots of career choice options on college entry), he does these NSF-EHR funded clinics leading poorly educated elementary school teachers to adopt a style that can't possibly lead their students to readiness for successful algebra. I have tried to redirect him but he won't hear. It would be easy to be cynical and credit that blindness to availability of easy money but I take the high road. I credit it to religious conversion - that he actually believes that stuff even while (as is absolutely the case) my university becomes overrun with people who can't follow a logical argument or understand and use standard mathematics terms at a level was standard decades ago - at the very least, anyone realistically expecting to be an engineer or a high school math teacher.

17. Re: help needed: political reasons causing the derail of the new-math?

2017-03-19 18:57

From: R.James-Milgram

When I was young and in K-12 back in the 1940's and most of the 1950's, I seem to remember that the notion of "equity" that seemed to be operative was that every student should have the opportunity to take academic courses or -- after about grade 5 or 6 -- concentrate on courses like auto shop, metal shop, wood shop, home economics, and so on.

In both paths there were challenges, but the objective of the first was to attend a four year college or university, while the objective of the second was to directly enter the work force after high school with a reasonable probability of success.

Unlike the situation in many other nations at the time (and later) which track was mostly up to the students to choose. There were no particular qualifying tests that had to be passed.

Somewhere towards the end of the 1950's, though, there was a change in attitude that began to appear. More and more students were encouraged to take the academic track since the jobs students tended to get from that track were higher paying, and, I suppose, more highly regarded.

Of course, to do this right, it would have been necessary to revamp the curriculum in the earliest grades, but this was simply not realized or accepted, and, anyway, people in education really didn't have much of an idea of how this change had to work.

The result was that large groups of students going through preliminary courses, particularly math, came out very poorly prepared to take courses starting with pre-algebra or algebra I.

And, unfortunately, it was generally the case that the vast majorities of certain groups of students, particularly those coming from economically deprived groups, or parents who were in occupations that required minimal academic knowledge, were the ones unable to handle the new material.

But the faculties in the schools of education by and large were unwilling to accept these kinds of outcomes, and over time, they came up with the idea that what should be taught was (a) the academic track, but (b) it was inexcusable to teach any content that would not be accessible to all these groups.

The effect was first a gradual dumbing down of the courses, and a closing off of opportunities for brighter student to accelerate. Unfortunately, over time these effect became larger and larger until we arrived at the situation we're in today.

So, instead of equity of opportunities we find ourselves trying to work to the lowest common denominator, and provide equity of outcomes.

Jim Milgram

18. Re: help needed: political reasons causing the derail of the new-math?

2017-03-20 06:13

From: Bishop, Wayne

Moreover, it is only getting worse with the state's blessing. Instead of rating schools by collective student performance (the old CSTs), the current is a panoply of criteria with graduation rate being #1 on the list for high schools and completion an important factor at every grade level. That puts even more pressure on passing people along finding creative ways of avoiding minimal competence. That was a big part of getting rid of the CHSEE. A high school math teacher who I respect immensely says that for lots of students, that exam was the only thing that motivated them to do anything at all. Now just don't drop out too obviously and you graduate. And there is lots of pressure on the community colleges and some pressure on the CSU's (maybe even the UC's?) to drop remedial math and remedial English because it's a roadblock to too many students.

<http://www.latimes.com/opinion/op-ed/la-oe-1015-mahoney-california-exit-exam-20151015-story.html>

Wayne

19. Re: help needed: political reasons causing the derail of the new-math?

2017-03-26 09:34

From: R.James-Milgram

You ask about the paragraph, particularly the "political reasons" mentioned there.

"Yes, the critical period where our system began to go entirely off the rails in both math and science was tied in to the development of the "new math" in the 1960's and early 1970's. The reasons were largely political in nature and were tied into the belief on the part of a large percentage of the professional math community of the time that the material then being taught in K-10 was "essentially trivial," and it would be a waste of time for a real mathematician to be involved at this very low level. "

60 years ago the U.S. government, in response to the USSR's putting a man into orbit in a way that we weren't yet able to, asked the American Math Society (AMS) to create a commission to write new texts in K-12 math that would match up with the courses being used in the USSR. The AMS created a committee to put together guidance for and a list of members of this commission. This committee only had one member who had any real familiarity with the USSR program, Lipman Bers, and I believe that he fully understood that what they had done depended on their use of the foundations for the subject that had been developed in Europe during the last half

of the 1800's.

In particular, he was fully aware that the development of texts that could match up with those in the USSR required a top level mathematician as leader. But the majority of the committee believed that the mathematics in K-12 was sufficiently trivial that they did not need a first line mathematician in charge. Instead they looked for someone with different qualifications, and found him in Ed Begle.

Begle, it turned out, had very strange ideas of even what mathematics is, and he chose people for his writing teams that had the same kind of view he had. The proceeded to write a new curriculum (called "the new math") over the objections of experienced K-12 math teachers and many mathematicians, and it was not successful. But too many of today's math educators (in the schools of education) liked what the new math was doing, and so it has had a huge influence of today's K-12 math curricula including the Common Core in the USA.

I hope these brief remarks are helpful.

Jim

20. Re: PISA and TIMSS -- BASIS charter school tops the world

2017-03-31 21:24

From: Bishop, Wayne

Sorry to be so slow but I got behind in my email. **That private schools collected data along with the charter school (publicly funded but locally controlled) can be a really mixed bag** For example, the first charter here in my geographical region of Pasadena (although officially under LAUSD) was further off the Constructivist gangplank than any public school in the region. LAUSD now has lots of them but, again, sometimes very different animals are linked together. If you haven't already noticed, TIMSS is meaningful but PISA is not but is the one everybody wants to quote. Finland is quite good when really it's horrible.

Wayne

21. Re: Investigations expelled

2017-05-10 13:56

From: Bishop, Wayne

Absolutely congratulations! **Now, the next step... Dropping the philosophy of non-teaching that drives this stuff.** It has been prevalent everywhere for decades but Palo Alto was a real pioneer in California. Bill Evers' HOLD even preceded Mathematically Correct, spawned by stuff already underway (but under the radar) especially at the elementary level. I never heard that Gunn, one of the premier public high schools in the country, was infected.

Wayne

22. Re: Investigations expelled

2017-05-10 16:55

From: R.James-Milgram

Both Gunn and Paly were infected, but it was (more or less) just isolated member of the faculties.

Jim

23. Re: Investigations expelled

2017-05-11 07:07

From: Bishop, Wayne

Didn't know that, obviously. Including a track using CPM (or worse, IMP or Core-PLUS)?

Wayne

24. Re: Investigations expelled

2017-05-11 07:46

From: R.James-Milgram

It was a long time ago so I forget most of the details. **But I believe that, somehow, Paly hired one of the CMP authors as a member of its math department, and he turned out to be very, very pushy.**

A major part of the reason for the involvement of at least three members of the Stanford Math Dept in trying to fix things in the district. Moreover, their complete lack of success was a key starting point for Palo Alto Hold.

Initially, it was felt that all we needed to do was to explain the mathematical issues with the new curricula, and the district would fix things. Instead, as you know, and anyone who knows something about the system would know, it was virtually impossible to get anyone in a leadership position to even listen.

Jim

25. Re: PISA; Finland; Progressivism Root of Common Core

2017-11-25 18:47

From: wbishop

My apologies for not getting back sooner. I simply missed reading a block of emails! **Your thoughts about PISA are correct and I knew it long before it came out because its design at Freudenthal Institute was led by a fuzzy math ed professor from the University of Wisconsin. He was the PI for a lesser-known middle school math reform project, MiC (Math in Context), that didn't teach math. The US press (international?) gives way too much credibility to PISA instead of the pretty good one, TIMSS. The attached is a summary of the more expanded:**

<http://nonpartisaneducation.org/blog1/2017/01/02/significance-of-pisa-math-results/>

Wayne

26. Re: why is PAUSD the hardest nut to crack?

2018-01-13 13:45

From: R.James-Milgram

I don't recognize the term WGPA but would infer that it refers to "tracking." **It is important to realize that in fully successful systems there is minimal tracking - just things like the typical sixth grade selection process we often see that divides students into two tracks, with one being high level college intending. But in the United States at this time, math instruction is so poor that much more extensive tracking is almost certainly essential if the students with the greatest amount of ability are to achieve success at a level that will match their ability.**

I believe that it is well understood by the few people studying gifted students in this country that they currently need to be in special courses that will not really be available to all students.

If you and the other PAUSD parents have been able to preserve tracking there, this is a remarkable achievement, and I am very impressed. **We had absolutely no success there in creating any changes in either the overall math curriculum or in their delivery of it over the many years we tried.**

Part of the problem was that PAUSD had learned over the years how to marginalize the real Stanford faculty (as distinguished from the members of the Stanford School of Education) and then ignore our objections and complaints to do exactly what they had intended to do from the beginning.

Jim

27. Re: why is PAUSD the hardest nut to crack?

2018-01-13 16:42

From: wbishop

WGPA means weighted grade point average; think 1-5 for AP courses instead of 0-4 for everything else. I do not object for traditionally and genuinely AP, calculus especially, physics, maybe literature and history, I don't know enough about them. **It is outrageous when there are lots of courses meaninglessly identified as AP that should be regular high school and students don't even take the College Boards exam or score poorly if they do. The differential GPA can be a break for college admissions but may or may not be appropriate or even beneficial since some selective colleges calculate their applicants' GPAs by their own scales using only courses they consider relevant. It's a clever way for a selective colleges to get applauded for dropping SAT or ACT requirements and still be the selected schools they're still going to be.**

I certainly endorse Jim's ideas on the importance of differentiated courses for top students. **In fact, the need is part of genuine social justice, not the kind ordinarily promulgated.** These kids deserve to be challenged at their levels every bit as much as kids do at the low-end. **Putting everybody together is always the education industry goal which says a lot about the quality of people in professional education.**

Wayne