Mike Lawler @mikeandallie

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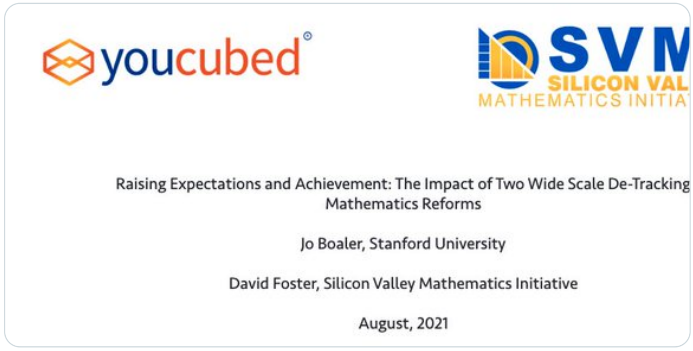
1/ I wrote this thread a few days ago about an article on youcubed that is referenced in the California Math Framework. Since then I've been trying to find out any more information on the claims in "study 2".

Mike Lawler
@mikeandallie · Follow

1/ Here's a long thread on the Boaler and Foster paper on Youcubed's website that is referenced in chapter 9 on the California Math Framework.

My main reason for writing about this is to gather my own thoughts as I'm completely at a loss.



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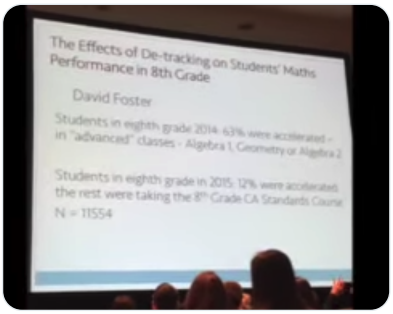
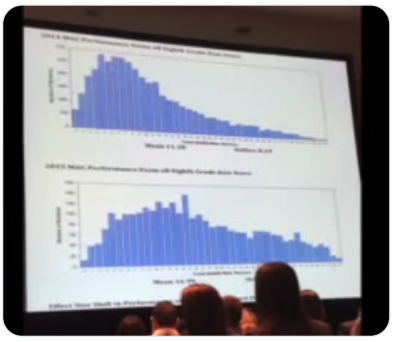
2/ Tonight I found a talk from the 2016 NCTM conference where the claims are discussed for about 1 minute starting at 9:15 in the video:

https://www.youtube.com/embed/KIdjTY6S6V0?start=553

3/ Sorry for the blurry video screen shots, but the study really does seem to be the same one mentioned in the youcubed post and the bar charts also seem to be the same as the one in both the post and in the CMF





4/ There are actually a few extra details in the talk that are not in either the paper or in the CMF. First is that there were around 11,550 students total. That matches my rough count of the two bar charts - about 8,500 in the first chart and about 3,000 in the second.

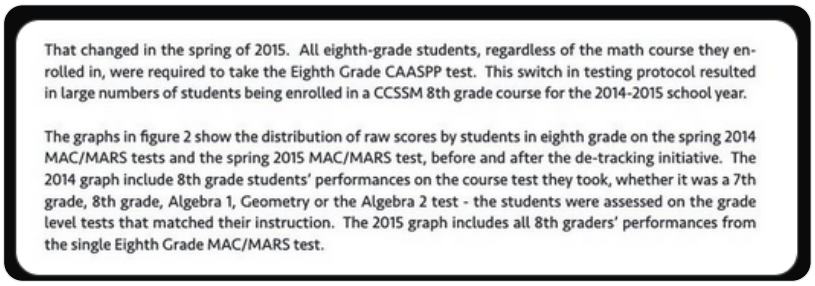
5/ I'd love to know why the number of students in the two charts is so different, but there aren't a lot of details.

Another thing mentioned in the talk is that in the first year (2014) 63% of the students were in advanced classes (algebra 1, geometry, or algebra 11).

6/ In the second year only 12% of the students were in advanced classes.

The claim in the talk is similar to the claim in the paper and in the CMF -> there were many more "high achievers" in the year where most of the students took the same math class. .

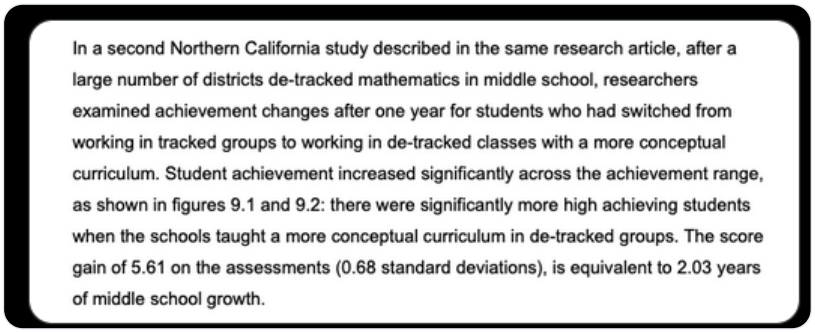
7/ If you go back to my original thread, you'll see that the first bar chart is a collection of scores across 5 different tests and the second is from a single test. It doesn't make sense to talk about achievement from a comparison of these test scores.



That changed in the spring of 2015. All eighth-grade students, regardless of the math course they enrolled in, were required to take the Eighth Grade CAASPP test. This switch in testing protocol resulted in large numbers of students being enrolled in a CCSSM 8th grade course for the 2014-2015 school year.

The graphs in figure 2 show the distribution of raw scores by students in eighth grade on the spring 2014 MAC/MARS tests and the spring 2015 MAC/MARS test, before and after the de-tracking initiative. The 2014 graph include 8th grade students' performances on the course test they took, whether it was a 7th grade, 8th grade, Algebra 1, Geometry or the Algebra 2 test - the students were assessed on the grade level tests that matched their instruction. The 2015 graph includes all 8th graders' performances from the single Eighth Grade MAC/MARS test.

8/ On other mystery for me in the CMF related to the youcubed paper (that is sadly not answered in the video) is the claim that as far as I can tell is only in the CMF that the score gains are equivalent to about 2 years of "middle school growth."



In a second Northern California study described in the same research article, after a large number of districts de-tracked mathematics in middle school, researchers examined achievement changes after one year for students who had switched from working in tracked groups to working in de-tracked classes with a more conceptual curriculum. Student achievement increased significantly across the achievement range, as shown in figures 9.1 and 9.2: there were significantly more high achieving students when the schools taught a more conceptual curriculum in de-tracked groups. The score gain of 5.61 on the assessments (0.68 standard deviations), is equivalent to 2.03 years of middle school growth.

9/ While there are still a few mysteries - at least the video tells us that 63% of the kids in 2014 were in algebra 1, geometry, or algebra ii, and in 2015 12% were in advanced classes. Also, the split of ~8,000 in the first chart and ~3,500 in the 2nd is roughly right. /end

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