

## WP series “math stagnation nations” highlight (1 page) as a wakeup call

1. I demonstrated in this WP series that **the math stagnations have arrived internationally, nationally, statewide, and for the big cities or districts** using the international and national data over the past 15-20-23 years. This means that the much larger forces than the individual efforts by the DOEs in the city, state, or even federal levels.
2. **The math stagnations are here to stay** although there may be some minor progresses or fluctuations temporarily **no matter how much money and efforts the local districts or DOEs put in.** (This is similar to reality that we don't grow more after we are about 20 years of age.)
3. Math stagnations are quasi-universal **in almost all developed OECD countries, including the USA.** The data were primarily from the PISA and TIMSS assessments (which are basically the Olympics and the World Cup in education) based on the past 15-20 years of data.
4. **For the USA nationally or for the 50 USA states individually,** the data from the NAEP (or “the Nation’s Report Card”) data 1992-2015 (for 23 years) indicate the math stagnations arrived around 2005-2007 for the grade 4 and around 2009-2011 for the grade 8. So far about 85-90% have settled in a few will start stagnating by 2017-2019.
5. **For the city or district level math saturations,** we can see this in TUDA program of the NAEP 2003-2015 (for 12 years). Although some cities joined later, the overall pattern is clear; except a few cities that seemed to have entered the stagnation zones 2013-2015, 18-20 big cities and districts have entered the math stagnations since about 2005 starting.
6. Once the math stagnations become dominant, then **the further growths are mostly wishful thinking because the EDU budgets or infrastructures are only parts of the solutions.** For instance, ethnic gaps of math growth have barely narrowed if at all for many decades statewide, nationwide or internationally according to the data from NAEP, PISA, or almost all others, e.g. the nationwide NAEP math gap between the White and Black is roughly 0.8 Standard Deviation which is only 0.1-0.2 Standard Deviation less than 25-50+ years ago.
7. **The math stagnations are real even for the 6-13-18 states that had pulled out of the CCSS by 2013-2014 before the NAEP 2015 math dips in both grades 4 and 8.** For NAEP math between the grade 4 and 8, there are roughly 4 year time lag between the math stagnations in the grade 4 and the grade 8 (making sense) except a bit of fluctuations in 2013-2015 probably due to the Common Core math factor. Even for these states, the math grade 4 dipped a bit for the grade 4 and their dip for the grade 8 were on par with those with CCSS.
8. **So the force of the math stagnations are far larger than the ongoing controversies about the impacts of the Common Core math impacts.** The math stagnations or dips in the grade 4 will further impact the grade 8 or more as this will show up in the NAEP 2017 and 2019+.
9. **Tech-based, math apps, etc. will not solve the math stagnations.** As many of the OECD countries, including the USA, have already experimented heavily with the tech-based math education for the past 4-8 years (at least) and still the overall average have declined instead of rising. Even the North-East Asian 5 countries that have played with tech have collapsed their math in PISA 2015 WITHOUT EXCEPTIONS, especially South Korea. This means the district superintendents and heads of the DOEs in the city, state, and federal levels should be more cautious of their over-optimism about the tech panacea for math.
10. **The most powerful, alternative solution in the world:** I propose the MMU1 (Mini Mini USL1) to you to try pilot studies together this spring in your districts or cities... MMU1 will boost the math poverty (25 percentile) to math prosperity (about 75 percentile) during the 1-2 week pilot study time. If you stay with the traditional remedies, you know the path. Time to change. The updates on Math Stagnation Nations and MMU1 can be found at: <http://uslgoglobal.com/wp-math-stagnation/>