Global math education stagnations in the developed countries series

& how to overcome them by empowering the math poorest half of the student population, starting with the MMU1 (Mini Mini USL1)
By Dongchan Lee

Part 3: Math EDU stagnations in most mega cities (or school districts) in the USA (January 31st, 2017)

Youtube video version of this is at https://www.youtube.com/watch?v=vB7LcMLVWs4
Updates can be found from www.uslgoglobal.com
Ending Math Poverty

Very quickly

25%

The Best math 50% (with the school teachers)

25%

~ 1.35 STDEV advances

25%

The Worst math 50% with Dongchan Lee

25%

With Dongchan Lee

Follow the Yellow Arrows that indicate the expected MMU1 impacts.

To see is to believe: Follow the 12 year trajectories by NAEP’s math National Report Card

To ignore this is not only the economic ignorance of a nation, but also to betray the future generations of all around you.
Key points:

1) Most of the cities that have participated in the TUDA of the NAEP of the USA have shown the indications that their city math average have reached the saturation points of growths similar to the results from the math results of the PISA and TIMSS.

2) For the math poor states, still there are more space of the growths, but most of the participating cities seem to have quasi-saturated for the math average growths.
Quasi-horizontal TIMSS math growths past 20 years and what MMU1 is equivalent to do if implemented (Yellow Arrows)

TIMSS Math grade 4th slow growths

- **Australia**
  - Mathematics achievement: 496, 499, 516, 516, 517

- **USA**
  - Mathematics achievement: 528, 519, 529, 541, 639

- **England**
  - Mathematics achievement: 484, 531, 541, 542, 546

- **New Zealand**
  - Mathematics achievement: 489, 493, 492, 490, 499

TIMSS Math grade 8th slow growths

- **Australia**
  - Mathematics achievement: 500, 506, 509, 505, 505

- **USA**
  - Mathematics achievement: 528, 519, 529, 541, 639

- **England**
  - Mathematics achievement: 501, 491, 494, 488, 488

- **New Zealand**
  - Mathematics achievement: 501, 491, 494, 488, 488

- **Singapore**
  - Mathematics achievement: 650, 594, 609, 608, 618

- **Czech Republic**
  - Mathematics achievement: 541, 519, 528

- **Singapore**
  - Mathematics achievement: 609, 584, 506, 503, 511

- **Slovenia**
  - Mathematics achievement: 484, 493, 521, 506, 516
United States: PISA math trajectories: **Math poverty levels & percentile distributions 2000-2015** (entire history)

Source: OECD, PISA data 2017

AUSTRALIA: PISA math trajectories: **Math poverty levels & percentile distributions 2000-2015** (entire history)

The red arrow is the math chasm between the top math countries and poorest math countries in the entire PISA and TIMSS tests.
MMU1 (Mini Mini USL1) proposals to the cities 2017-2020 (2-3 years)

To the 5 categories of math growth cities (or school districts) that have participated in the NAEP’s TUDA program, in the USA

- Atlanta
- Austin
- Boston
- Chicago
- District of Columbia
- Los Angeles

- Houston
- New York City
- San Diego

- Charlotte
  - Dallas
  - Hillsborough
  - Miami-Dade (FL)
  - Jefferson County (KY)

- Cleveland
  - Detroit
  - Fresno
  - Milwaukee

- Albuquerque
  - Baltimore City
  - Philadelphia

Source: https://nces.ed.gov/nationsreportcard/districts/
For those grew much initially, but about to saturate or have been saturating...
Average Scale Score over time for Boston

Grade 4

Grade 8
Average Scale Score over time for Chicago

Grade 4

Average Scale Score over time for Chicago

Grade 4
Average Scale Score over time for Los Angeles

Mathematics (0-500)

Reading (0-500)

Grade 4

Grade 8

Average Scale Score over time for Los Angeles

Mathematics (0-500)

Reading (0-500)

Grade 4

Grade 8
For those grew much initially, but saturated and decaying
For the math growth saturated cities
Average Scale Score over time for Charlotte

Mathematics (0-500)

Reading (0-500)

Grade 4

Grade 8

Average Scale Score over time for Charlotte

Mathematics (0-500)

Reading (0-500)

Grade 4

Grade 8
For the math growth stagnating cities (near the bottom)
For the math growth worsening cities