# Letter: Parents in Support of Singapore Math for Fairfield Students

**By Eileen Lu**


Tomorrow, March 12th, Walter Wakeman and Anna Cutaia-Leonard will present to the BOE the K-2 math curriculum as well as a recommended math textbook to comply with the new Common Core Standards (CCSS) adopted for the purpose of raising the level of academic rigor.

We are interested parents of Fairfield and we vote for Singapore Math (SMP or MIF). We would be remiss as parents if we blindly follow without questioning and do not intervene when things threaten to go awry. Parents are concerned that the administrators may recommend use of a) the *TERC Investigations* text or b) sticking with the current practice of the "*patchwork*" resource method. Both options are unacceptable.

***What is the Current teaching practice?***

We refer to it as a **"*patchwork*"** method. The district pulls materials from different resources, a primary source being *Context for Learning Mathematics by Catherine Fosnot,* to support the delivery of its curriculum via its chosen instructional model. Professor Catherine Fosnot is recognized for her work on constructivism or "fuzzy math."[1] Some thoughts on this "patchwork" approach:

**a)** Fairfield public schools asserts they are implementing a Balanced Mathematics Instructional Model that balances both conceptual and skills/procedural development in compliance with CCSS. And yet, Riverfield teachers are being quoted as saying that if they had to pick a text, they would most prefer TERC Investigations because it is most like the current method of teaching. TERC is infamous for its emphasis on conceptual or "fuzzy math" – open ended discussion at the expense of skills mastery.

**b)** We question how well exercises are sequenced or connected vertically from one year to the next, as required by the Common Core, if materials are drawn from different sources and cobbled together.

**c)** There is NO text for students. Because there is no text to clearly define the path of learning, parents and children have difficulty reinforcing understanding outside of class. Not all children learn best in classroom settings. A good overall understanding of what the objectives and lessons taught in class can get lost/forgotten without a text for independent study, clarification and referral. An excellent text allows children's learning to continue inside and outside the classroom. How can a student review material to enforce mastery? They can't.

**d)** There is a lack of consistency throughout Fairfield on instructional method / how the curriculum is taught. Parents know there are clearly differences between individual teachers (as evidenced by testimonies from several parents with twins). But marked differences in delivery is evident from school to school as well. For example, two Fairfield schools, Burr and Dwight, have Flexible (Homogenous) Grouping where children

are grouped by "knowledge readiness" across the whole grade for math based on unit by unit assessments. Students physically divide and levels are taught by different teachers according to their varying "readiness." There is different homework and differing rates of knowledge building for each group. But other Fairfield schools *do not* have this. We believe this "best practice," which contributed to superior CMT results, should be implemented at all schools equitably. Why has it not been? Learn more about Homogenous Grouping here[2].

Instead, other schools may pair children of similar "knowledge readiness" within a mixed ability class to work on a problem that is not customized to levels of "readiness." These methods are very different.

In summary, "patchwork" method means some schools are using more effective methods than others across a grade, some teachers may be more effective than others, some teachers actively give learning enhancements but some don't… *A strong common text can help reduce the margin of deviation for differences in teaching methods and quality throughout the district.* Every child in Fairfield should be given equitable access to the same best practices and math resources. Furthermore, those resources should be outstanding in quality focusing on *mathematical content* and be well vetted by people all over the country, not just Fairfield. We vote NO to "Patchwork."

***TERC Investigations?***

TERC believes in conceptual open-ended problem solving without emphasis on skills fluency. TERC doesn't teach long division or "borrowing" and "carrying." By second grade, it espouses the use of calculators for large numbers. In 2007, when conceptual, constructivist math was lauded, 70 districts were TERC showcases (Connecticut Department of Education even funded TERC). Two years later, a study examined the "Evidence for Success." Results showed 51% of the districts had or were in the process of dropping it. Math professors proclaimed TERC instruction ("fuzzy math") set students two years behind by 5th grade. Although TERC realigned itself to Common Core, TERC has not demonstrated the ability to lay the foundation necessary for being successful in Algebra… a leading indicator to success in college. Colleges and mathematicians are questioning the K-12 math education of this last decade (the decade when progressive constructivist influence took hold) as creating a generation requiring remedial math.

More links to check out:

http://www.youtube.com/watch?v=HwdELHKB0Tw&feature=youtube_gdata_player [3]

http://www.wpri.org/WIInterest/Vol10No1/Vukmir10.1.pdf[4]

We vote NO to TERC

***Singapore MATH (SM)?***

"The Common Core Standards in mathematics are partially based on Singapore's national syllabus. The intent of many of these standards is more obvious to those who have used and understand Singapore Math than those who have not." The *SM* method is being used by 1500 schools and endorsed by some of the best schools in the country, including President Obama 's daughters' school. Singapore developed this method for the purpose of improving the math literacy of its students, propelling it from #16 to #1 in the TIMSS rankings for 4th graders. It uses both abstract and pictorial methods and develops both conceptual understanding and reflexivity in math facts, consistent with our Balanced Approach and CCSS. Though more rigorous, it has been shown to be effective for *all* levels of learners. For the most challenged math students, Singapore implemented supplemental special support to make sure all groups were provided with the opportunity to excel. Neighboring districts (like Westport, Wilton, Weston, Bridgeport, Farmington and New Haven) have on- boarded *SM* to meet CCSS. The biggest risks to a successful implementation is failure to provide adequate Teacher Development and being less effective for a transient population, which Fairfield is not … For more color on SM, click here[5].

Considering possible reasons why Admin might prefer "Patchwork"or TERC:

**1) Administrators have a bias towards conceptual math over skills development:** We believe both are equally important and the CCSS requires the delivery of such. A biased TEXT like TERC is undesirable.

**2) Admin believes our current "Patchwork" model is successful based on the pilot for grades 3-5**: For school years ending 2010-2012 Dwight, Burr, Holland Hill and Jennings were "lead schools" in a pilot study presented to the BOE for the new math instructional model based on the new curriculum for grades 3-5. We took a look at CMT performance during this period[6] as a measure of success. We discovered that the average performance of the "lead" group CMT scores were down slightly over this period,

while the non-lead Fairfield schools were slightly up. Additionally, looking at the individual lead schools' CMT performances during the pilot period, only Burr and Dwight's performances improved. However, Burr and Dwight results are not valid data points for the new pilot model's effectiveness for the overall district because they include flexible grouping effects that cannot be isolated. We are then left to look at the remaining two schools, Jennings and Holland Hill, which both had decreases in CMT results during the pilot "patchwork." Why would we believe the new "patchwork" model to be more effective than Singapore Math?

**3) Admin and some teachers prefer implementing a familiar method**: How do we know "familiar" is better than new? Does the curriculum strive to be 15% over the CCSS content as permitted by the Common Core like our peers districts are doing using SM? What are the benchmarks to measure the "patchwork" method's success against the best in the country? We don't really know. They say it is successful, but who is to judge effectiveness until we see how well our students are prepared to outperform in algebra. If this untested "patchwork" is not effective, it will be too late for our kids. There is no track record, there is little accountability. Again, why would we think that cobbling together a new "Patchwork" framework is superior to SM? SM has been vetted by hundreds of respected professors, institutes, parents and educators on the receiving end and called "the best out there." It is consistent with the CCSS and its intent, to allow U.S. students to successfully compete with the likes of Singapore's math program. This is no experiment. Parents want something that has a proven track record. Our children don't get these years back if the experiment fails. Fairfield may write its own curriculum **but give us an Exceptional text with strong mathematical content** to lean on.

**4) Teacher Development Costs**: Sound Math leads to sound Science – the foundation of engineers, doctors, chemists, finance managers, technology, scientists… Are we saying we are willing to compromise the competency of the next generation of students on whom we will rely when we are older? We can't afford to skimp on MATH. At first, administrators emphasized that significant teacher training is needed for SM to be successful. They quietly voiced concern that SM teacher training was expensive. What if teachers only received half the required training? But what about "patchwork"? Would that not still require professional development + a full-time curriculum leader and outside consultants (e.g. Keogh and Foznot )? But then we were recently told by two text committee members that full *training costs would not be an issue regardless of the program selected.* In that case, there should be nothing holding us back from implementing Singapore Math. Right? But if, in fact, the cost of teacher training is the actual underlying root of why folks are reluctant to on-board SM, we need to take a hard look at

our values.**Find the money!** This district needs to get its priorities straight- *don't raise taxes… cut administrative costs, delay projects , realign curriculum leaders more efficiently*. Consolidating all of K-12 curriculum responsibility to only one leader is probably more efficient and effective at planning curriculum to smoothly move students from one level to the next all the way through 12th grade. *Student programs and teacher development in order to deliver "best in nation" education for our students should be the* ***absolute last thing*** *compromised.*

**The Common Core initiative was intended to *raise* the level of academic rigor for all children so that the nation can compete globally.** We are parents of Fairfield public school children. We say YES to *Singapore Math* and we say YES to training our teachers to deliver the *"best in nation"* math education. We hope the Board of Education and Administration find the stalwartness to agree and determination to make this happen for all the children of Fairfield. **Invest in our teachers' development, invest in our children's education, elect to implement *Singapore Math (MIF or SMP)***.

Links


1. http://www.gobiged.com/wfdata/frame288-1064/pressrel25.asp
2. http://www.academicjournals.org/ijpc/PDF/Pdf2011/March/Adodo%20and%20Agbayewa.pdf
3. http://www.youtube.com/watch?v=HwdELHKB0Tw&feature=youtube_gdata_player
4. http://www.wpri.org/WIInterest/Vol10No1/Vukmir10.1.pdf
5. http://isingaporemath.com/singapore-math-and-the-common-core-standards
6. http://solutions1.emetric.net/cmtpublic/default.aspx