

UMLN Retreat Lakeway, Texas June 17-20, 2004

Notes by Jon Paslov of IFL/SCALE and Sherri Jones of the Dana Center

Thursday 6/17 Meeting began Thursday night with a reception, meet and greet and introductions by all.

Friday 6/18

Uri Treisman –

“Mathematica” Research and analysis by Teach for America: strong support systems for teachers are crucial; clear goals. Things proposed as “solutions” should be perceived as “tools”

- Coaching is this year’s solution like Lesson Study was last year’s
- Must build on existing strengths – what students are able to do is a product of what the school and teacher can do; it’s not where you are it’s where you can be
- If the goal is more students passing algebra, what are the implications if achieved?

Some statistics:

- California is below Mississippi on NAEP
- There are 50 different school systems in the US
- Texas, Michigan and Indiana performed better on the third International Math and Science can study and then Australia, New Zealand and Denmark
- Average freshman GPA at Cal and UCLA, 4.2, because students get five points and advanced placement (AP) courses in California. There were over 800 students with 4.0 GPA, mostly African-American and Hispanic, denied admittance into the schools with 4.0 GPA’s because the schools attended didn’t offer AP courses.

Meeting broke into site teams, each reporting back on the problem areas they want to focus on. Four most significant and common problem areas were pulled from that.

Each team reported on their strengths and challenges. Findings below in tables.

Denver	
Strengths/successes to share	Math team works together. Math team broken into 4 quadrants. 8 have gone to professional workshops. Team strength, modeling the learning for teachers. 8 th grade algebra, adopted CNP district wide. Students get algebra credit in 8 th grade through test, even those in CNP. Every Day Mathematics in K-5.
Greatest Challenges	Deficit model of thinking. Not focusing on what students don’t know. No more pre-algebra, so the teachers don’t know how to teach a wider range of students. A different knowledge needed, how learning takes class. Where learning can go Teachers seeing themselves as professional learners. Many people are proud of the fact that they do the same thing they did 20 years ago, change that!

Boston	
Strengths/Successes to share	Acknowledgement that it is ok to have a body of knowledge, expectations that students should learn, know. Written scope and sequence. Have benchmark assessments to drive instruction, clarify the beliefs of the districts about what students should know. 24 hour turnaround of results. Each question is tied to framework and materials. 13 tests. Wanted to change the belief about what children should learn. This year it is going online. Wonderful system of coaches. Changes next years teaching. Tests have been very helpful. Support of the superintendent was the #1 thing that let this happen. Big improvement in middle school.
Greatest Challenges	Math content knowledge for teachers we hire. People understanding mathematics well enough to deeply communicate with students. A lot of wrong math being done. Poor instruction skills.
Lessons Learned	Importance of the superintendent. Example-when materials were out of alignment, superintendent let them buy new. “Drumbeat” -Always talking about a big vision. Talk about success- what is the BIG thing we are doing. Then be happy with the small steps taking. Always pushing forward. Celebrate incremental changes. Need to provide professional development for coaches, moving coaches to supervisory positions.

Richland	
Strengths/Successes to share	Nested community. Benchmark tests and aligned curriculum with assessment standards used. Quick turn around for scores. Gave 3 last year, will give 2 this year. Teachers use the tests, curriculum resource teachers in each school help teachers use the data from the test, can provide resources, training to teachers based on identified weaknesses from the test. CRT can provide time for demonstration lessons for teachers. Curriculum Guide to help them, cross sectional team (title 1, subjects, ect) to help communicate to teachers more efficiently. Test and evaluation office available to teachers.
Greatest Challenges	Looking for math teachers! Difficult to find and keep teachers, HR recrute all over the world. Bring in from other nations with different cultures, language. Some schools went all year with math vacancies.

Chicago	
Strengths/Successes to share	Incredible support from university mathematics and education departments-for NCLB teacher quality, programs lead to more highly qualified teachers-over 800 enrollment in courses Step up to high school-target students at risk. 1. Transition summer school for students behind based on Uri example, failure rate has not changed, but only one source of data, but students that took extra period of math and went to summer problem, failure rate dropped. 33% failure rate in Algebra. Efforts to keep 9 th graders on track.
Greatest Challenges	Everything is framed by site based management-600 schools to coordinate. 86 different math books k-8, no common instructional materials. Difficult to have common support, language. Providing incentives to move toward central materials. Give extra professional development and small monetary incentives. Intense pressure for immediate results with no intermediate measures that show progress while making strides toward final goal. It forces people to make shortcuts that don't work. Behind on intermediate assessments.

Spokane	
Strengths/successes to share	Growth in student success in mathematics- 50% higher enrollment in upper level math classes- More teachers and students believe they can. Higher graduation requirements. More collaborative effort, state redefined where all students need to get to, and teachers feel responsible for getting them there.
Greatest Challenges	System wide lack of understanding and support of mathematics-professional development tends to be generic-what is mathematics
Lessons Learned	Found a school in Seattle where 15 min a day spent on math in elementary, principal was not checking. Really important for leadership, building level.

New York	
Strengths/Successes to share	Implementation of uniform curriculum materials across the district. 1000 math coaches. New curriculum gives foundation in algebra.
Greatest Challenges	Consistency in reaching the classrooms. Information is not getting to the classroom. How to reach all coaches. Parent coordinator is a paid position, 1200 people, more to reach. Hard to reach P.C., offered Parents to have a course over the summer, parents said no. Trouble in reaching principals, they think they don't need district help, the principals have a program with the GE pres. Mathematical preparation of teachers, what knowledge they have and how to keep them
Lessons Learned	Coaches from outside organizations, biggest mistake was to not coordinate and monitor these coaches. Paid differently, some don't know what they are doing. Some are retired teachers, being recruited from school district. Next year they have to take professional development and a system of evaluation for coaches. How do you support change? Studying change was powerful for coaches.

Below is a list of the complete answers from all districts (copied from charts on walls)

Strengths	<ul style="list-style-type: none"> Movement towards designated materials and strong support structures for implementation Clear, specific grade level expectations Development and support of instructional leaders Reorganization of school system into ten k-12 districts Coordinated plan for PD and curriculum implementation Support system of math coaches Organization of citywide professional development Math team(central and area specialist) connected closely with schools STEP-UP to high school Uniform curriculum materials chosen by NYC math community Strong partnerships with university mathematics and education departments Aligned curriculum with assessments and standards that is communicated and used Cultural shift – principals accepting need to commit extra resources and time; Acknowledgement that its important for kids to know this math and that its reasonable to expect; superintendent support
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<p>Greatest Challenges</p>	<p>System wide lack of understanding and support of mathematics Finding and retaining secondary math teachers The lack of mathematical preparation of coaches and teachers Content knowledge and comfort of k-12 teachers (good instruction) Implicit deficit model thinking; lack of time with administrators Teachers seeing themselves as professional learners Lack of access to certain audiences (principals, parent coordinators, ect) Effective academic intervention Pedagogy-lesson planning, closure, organization, how principals look for good training Computation/automaticity Union president plans to target the elementary curriculum (Boston) English language learners and special education Create direction, coherence, support within a site-based decision making system.</p>
<p>Lessons Learned</p>	<p>Important to have superintendent press on, take the hits for the stretch goals Schools can and do make a difference for student learning as shown by data Importance of communication at all levels; Clear and concise communication to all stakeholders. All carrot with no stick is not enough to drive change Always keep talking a big strong vision and allow/celebrate incremental change Need to balance “pressure to act vs. careful planning Awareness of less time being spent on math than we thought The structures of the PD (time, ect) determine who will come Participation in IFL/SCALE created cohesive team and increased our PD capacity Need to monitor and coordinate constructed non dept of ed professional development procedures. Need to have direct line of communication with coaches. Need for differentiation of professional development; need to include more voices in professional development plan (special ed, ect).</p>
<p>Successes to Share</p>	<p>Growth and support for facilitator/coaching models(Spokane) University program (Chicago) Collaboration with textbook publishers(New York) Increased participation of the educational community in decision making; (North advisory panel, HS committee, Special ed and English language learner committees); Increased focus of mathematics over last 4 years (New York) Rising scores 4-12; Coaching and assessment; MyBPS data system (Boston) Significant increase in math scores (2003) (New York) All 9th graders enrolled in alg or above and we saw higher passing rate in algebra(Denver) Growth in success in math (k-12); Increased enrollment in higher level courses Collaborative scoring (MS and HS) of 8th grade Algebra Tests; Coherence between 8th and 9th grade (Denver)</p>
<p>Hope to see/hear</p>	<p>Diagnostic tools; Intervention strategies; Math content coaching vs. generic. How to use Tldrs in schools. Sharing of resources and information with other districts More opportunities for this type of forum Help with accountability model for coaching Strategies to break the “deficit” model How to increase participation in AP classes Form a network of support among urban school districts Help with coach training; Complementary just-in-time p.d.; Transition from hours looking at data to use for changing instruction. Coaches; Algebra; Scale-up Summer/after school; Assessment/evaluation More schools who believe it is the adults in the school who influence (+/-) student achievement. Acquire and retain secondary math teachers</p>

Three Common Challenges
Professional development for teachers and coaches. Teacher content knowledge – how do you address the need?
Assessment/academic intervention
Special needs populations /Articulation/coherence K-16

From these lists, the following challenges were decided upon:

Results from small groups- clarification of issue

<p>Professional development for teachers and coaches. Teacher content knowledge – how do you address the need?</p> <p>Professional Development for Coaches.</p> <ul style="list-style-type: none"> • What do you do- Content, instructional strategies, differentiate instruction • Who-Outside, local, within • Payoff-stipends, credit • When-summer, throughout the year? <p>Solution paths-</p> <ul style="list-style-type: none"> • Create a PEBC (One location where you have model schools and classrooms that have created strategies and people come from all over the country to get PD onsite. They see it happen, hear kids, model the things you hear people doing • Designing courses at university that teachers need. Push back-don't just take what the University gives. Degree for math coaches-Vermont. • Rubric for coaching-calibration. • Establishing standards for coaching, programs. • When is coaching effective, not effective? • Have coaches develop their own vision. <p>URI-Design PD with leadership of school in mind. Think of PD for teams of teachers in a school, think of it as a team activity. Problem focused PD-work around an issue that the principal thinks is urgent, develop tool to solve a particular problem.</p>

Assessment/academic intervention

- Denver-Ongoing assessment is important to keep teachers going on pacing guides. Also to have data, analyzing student work, in a timely way, as opposed to year tests. Success breeds success. Seen as meaningful.
- Curriculum embedded assessment, Showing growth.
- Chicago-bring 8th (in the 40-50 percentile) to the high school they are going to in the fall, do math, reading, counseling beforehand.
- More time for math-double periods, but be focused on what is happening. A teacher every period of the day to help students during study hall or extra student.
- Different scheduling options-two teachers per classroom. Innovative software. Constructed response questions scored online so people can look at them.
- Scaffold weak foundation.
- Boston – Learning center for algebra with special needs students- kids could work on homework, prep for next day, ect. The teachers had PD for math each day, it was a very successful program, but it was cut for budget reasons
- Spokane-Tried to have a support lab-failed, attitude was to fix the kids. This year more successful, attitude was to help, not fix. It is teaching ahead, not homework help or skill review. All but 3 passed. Financed some by Title 1 money. Administrators find the way to pay for it, if it is important to them.

URI-AVID-certain kids fewer courses, elective is helping kids do well in core courses. Double period classes don't help when it is remedial. Important to support students

Special needs populations /Articulation/coherence K-16

Challenge is –

- How do you develop a system of strategies for special needs students, especially around points of transition.
- Path- Special ed. Do they have access to curriculum?

What are the best practices?

- High profile group with expertise with special ed/ ESL to come together to create positive pressure to bring forward and get the thing moving
- What is the role of technology? Videos, internet, ect. How does that help us move forward?

How will we know we are being successful?

- In the successful schools, the schools identified the problem and asked for help.
- Interim progress markers

Thoughts from the panel of experts

Penny Noyce-A lot of interest in hearing what other districts are doing. Next step is can we define the challenge and develop a system of strategies? What are the implications for PD, Parents, how kids are placed in Spe Ed, how does this interact with literacy. Think of the whole system of delivery.

Kay Merseth- The first order solutions create second order problems.

Barbara Libby – State needs to listen to districts, what are the effects of the policies from the state, federal level. Look for the resources and support among partners. (Achieve, Noyce, ect) Title 2B program supports PD for teachers to increase content knowledge. It appears that there are so many choices, what kind of models, what resources? What vendors? Research. Resources- Often there are resources for the programs, if they are proposed to state department, they might craft grants. Knock on State Department door and ask. Articulate and clarify what you need.

David Foster– Formative feedback lacking. Informing-why are we in the place we are in?

Mark Koester- It feels like we are slowly moving towards a data driven system of improvement. But the tools may not be in place yet.

Terry Millar- SCALE 1/7 th of budget is on rubric, case study, indicators, formative assessment of programs. Coherence with Title 2 B-district takes charge of title 2b.

Uri-Field has a collective amnesia. Solution is not easy. Disorganized. Making education more transparent. Strategy-match to capacity, what do districts need? Individual effects district policy. What

kinds of networking strategies are available? Think strategy, what are your internal capacities, what kinds of tools do you need?

Saturday 6/18

Conversations between districts:

Boston

Initiative – Students understanding number sense (+/-) rational numbers.

Pathway – Look at districts implementing TERC, if it is working go out to see it happening, possibly invite TERC out.

If kids memorize, some teachers would be happy because that would be the outcome that they wanted.

Some teachers don't understand the math underneath.

URI- Number sense is polarizing; Focus groups – parents remembered doing math around the table with parents, image presented by experts threatened family life culture.

New York – We introduced math steps and everyday math at the same time to address this problem.

Integrate the two. Most math steps are focused on sending the material home.

Phil – you can't fire the parents from the one job they feel competent to do- help the kids with homework in math.

New York

We looked at how this will impact next year. Looked at the calendar, inviting all to come to New York.

We want to work with Chicago with Step Up. We are developing materials with Prentice Hall, want to build in the idea of preteaching.

We are interested in Boston's way of scoring tests, alignment with interim assessments with program, standards.

Sp Ed, Looking at Video taping with Catherine. Want to continue to improve with coaches.

Chicago

K – 8 program – We are building capacity in Professional Development. External providers build internal expertise. Driven by thought that school issues trump PD.

Coaches - Weak in this area – Coaches think of themselves as PD, but struggle with going into classrooms and engage teachers in discussions. They like to be advise givers in general, not in classrooms. Need to learn a little bit more.

Benchmark assessment - interested in how to use as a support, not accountability.

Special ed - Gotten ideas of how to address special ed students. Neighborhood schools have large populations of special ed.

Want more info on after school and summer programs – strategies and programs.

David Foster – Where are they finding all these coaches? We took years to groom coaches. A good teacher does not necessarily make a good coach, need time to build relationships with teachers. Big worry is that coaching is powerful when done right, if we put all these coaches out and they are not prepared and then the idea will be that coaching does not work. We have coaching institute in summer that prepare and build relationships with the teachers before school starts. Coaches have to get into the classroom.

Ed – Now ask of coaches - Are you quick to make friends, Are you good at relationship building, are you nice? Do you feel passionate about kids learning math? Have you worked in urban schools, are you good at math? This has changed a lot, the nice ones have great successes, building caring relationships.

Barbara – How do you measure change in practice?

David – Use Deborah Ball's assessment, look for student achievement first. Give a performance exam is extensive and gives feedback to teachers, useful information. The foundation has a website for this exam.

New York – Can you (URI) organize an opportunity to go see this Coach program of SCALE (Spokane seconded this motion).

Richland

We don't have coaches, how could this tie in with what we have at our CRT's , same capacity just not called coaches. They don't have content training now.

Special Ed – Trying to increase achievement, cross sectional teams, don't have anyone from Special ed and ESL, we are going to include them in the teams when we get back. So they can receive the training also.
Boston - We are going to have math people teaching special ed people math. We have teachers that teach math to special ed but they don't know math that well. If they
Spokane – Sp ed attend PD for math people.

Spokane

Just beginning to hire math coaches, have had literacy coaches for years. The same people are hiring both. We need background and knowledge, ammunition to say that math coaches need to be different from literacy coaches, different training. That would be huge to come away with. Plans right now are very generic for PD for coaches.

Need - If we train math coaches, we need a dedicated person to train and supervise them, not just an added responsibility to another person's job.

Marty – No one had ownership of the training of coaches, that was a problem for us, also.

New York – Our program has three levels - Level A – New people coming into system, Level B – At least one year of experience. Level C – Lead coaches, they get special training during the year. Hoping this goes well, it is just starting. We will give the dates for this training, all of you are welcome to come to join the training.

SCALE – Lauren Resnick; Andy Porter; Terry Millar (Andy's powerpoints are on the website)

Andy Porter – What can districts do to make professional development work?

- Bulk of money for improvement spent on professional development.
- Characteristics of successful PD are Structural features, duration, collective participation. Core features- Focus on content knowledge, active learning and coherence (alignment), continuity of learning and building a professional community.
- To address the core features, you will either have to spend more money or become more focused. Become more focused is better.

Measuring the content of instruction- What are teachers teaching? Is it aligned to state standards? NCLB requires test aligned to standard. Andy briefly showed how to measure content of tests, standards.

Lauren Resnick – School districts as learning organizations

- Fundamental organizational problems.
- Leadership Challenges – Teaching all students, under conditions of high stakes testing to levels once reserved for a privileged minority.
- The temptation – manipulate incentives to get people to work harder and goals will be met.
- The reality – If people knew what to do they would be doing it. The solution is to work smarter. Everyone needs to learn. Districts have to become learning organizations, ones that are getting better at what they do. Need nested learning communities. Think of teachers as learners and they can become a learning community.
- Knowledge professions- one that depends on continuous upgrading of competence, extra skill/knowledge needed. Data – based self monitoring
- Human capacity is open-ended. IQ scores have gone up. Heritability results, cognitive science and psychology. We can build “smartness” in kids by the kind of environment they live in. Intelligence can be socialized.
- The environment we live in - Model of structure in school district leaves people at edges (math curriculum people) out of the accountability roles of superintendent, principal, ect. Need to make triangles of accountability lines that include them, coaches.
- Curriculum and PD directors – WORK with area superintendents to plan and implement curriculum-based training. Also responsible for designing and training coaching programs.
- Core commitments – Effort based, data based reflection, continuous professional development, two-way accountability (Everyone can be expected to learn, I can hold you accountable to learn, you can hold me responsible for giving you the opportunity).

INSTITUTE FOR LEARNING

Disciplinary literacy – Mary Lou Metz

- Effort creates ability
- Principals of learning (9 of them)

- Academic rigor in a thinking curriculum; what is it?
- Nested learning community – starts at the superintendent level, then principal, coach, teacher. All get the same message.
- Structure – 2 three-day workshops for participants at the university of Pittsburgh. Participants are math leaders. IFL math team members work closely with district.
- Disciplinary literacy is in all 4-core disciplines. It is for middle/high school.
- PD – Start with a mathematical task. Then talk about case studies of teachers doing the task with students, developed with Peg Smith. Last is illumination of student thinking, looking at genuine student work – what did this student know mathematically? What questions would you ask this student? Work guided by research.
- Mathematical task framework – start with high level task, end result is student learning.
- For next year – How do you coach/facilitate the component in PD? Video of a coach helping the teacher prepare to teach the task to students. Also a piece about how to use data to inform and guide PD.
- Accountable talk – What kind of talk goes on in the classroom? What questions do teachers ask? What questions do kids ask each other? It gave Denver a language to use with teachers during PD. Also something that teachers used in classrooms.
- Richland – Focus on DL training this summer we are having an institute. Implementing this year. Advantages – Culture change in that now we have teachers that are seeing teaching as a science based on research. Common language for discussion with district, principals.

DANA CENTER

- Susan – What does it take to actually bring the PD into the classroom? We are advocating teachers are asked What is it you want to teach (standards) How would you assess their learning? Then plan the lesson. Problem of disconnect between PD and materials.
- Agilemind.
Linda – Completely internet based. Serving 50,000 students. This is not intended to work at virtuoso level. Intended to be cheap, serve regular teachers, with little time. Thinking of areas of less intrusion. No instillation in the school, selected teachers get usernames and passwords, can use anywhere. Kids are using at school, in library, at home.
Algebra I – Purpose is to help teachers. Intended to be with the teacher through the whole year. Each topic has overview, exploring. Typical usage is one computer in one classroom and one projector.
Some users are comprehensive – data shows that teachers are saving time in building lesson plan. Many teachers use it 3 days a week. They make homework assignments, use it for assessment review and for students that miss class. Time is provided for students to work in labs or in library. Constructed response is for students to work offline. Instructional planning is evidence based. To participate you must be willing to become a research partner. Charge depending on size of school, number of children, ect.
Advanced – \$20-25 per kid, \$500 per teacher. Bundle all 4 – at \$20 per kid.

Sunday 6-20

Sunday – Last Day

When some of the ideas for next steps and issues to remain focused on were:

- Improving teacher performance soon
- Creating an electronic tool for all UMLN
- Hiring a common secretary – currently Sheri serves this role
- Determine exactly how the network will work; including possibly creating an Executive Committee (sharing is not enough or an agenda)
- UMLN is working to bring together state and district people
- Noyce has established programs
- “Collaborative Filtering” Uri suggested this is an idea, not sure exactly how

Coaching

- Will coaching last or is it an educational fad?

- Create a set of guidelines for coaching
- IRA (International Reading Association) is coming out with a set of coaching descriptions
- Spokane has a hold on funding for coaches; the district has come up with criteria upon which coaches are evaluated
- What is the structure upon which each coaching is created? Will that structure remain in place if coaches leave?
- It is important for coaches to be evaluative of teachers without necessarily evaluating teachers: teachers often feel threatened by coaches
- Ed Joyce from Boston – For us, the most important element of coaches is the capacity to work with people and build relationships with teachers

A follow up meeting, the theme of which will likely be around coaching, is planned for fall or winter of this year in Northern California at or around the Noyce Foundation offices. The Dana Center will write a letter to district superintendents to communicate with them the work of the UMLN and the next steps.