

Madison Metropolitan School District
Madison, Wisconsin

Art Rainwater, Superintendent

BOARD OF EDUCATION
Minutes for Math Task Force

Wisconsin Center for Education Research
1025 West Johnson Street
Room 378
Madison, Wisconsin

March 7, 2008

The Task Force Meeting was called to order by Co-chair Merle Price at 10:33 a.m.

Membership:

Dr. Martha Alibali, Professor, Departments of Psychology and Educational Psychology, UW-Madison
Dr. David Griffeath, Professor, Department of Mathematics, UW-Madison
Dr. Eric Knuth, Associate Professor, Department of Curriculum and Instruction, UW-Madison
Dr. Mitchell Nathan, Department of Educational Psychology and Curriculum and Instruction, UW-Madison
Dr. Norman Webb, Senior Scientist, Wisconsin Center for Education Research, UW-Madison
Dr. Kenneth Zeichner, Associate Dean, School of Education, UW-Madison
Dr. Jim Lewis, Professor, Department of Mathematics, University of Nebraska-Lincoln
Merle Price, Lecturer, Educational Leadership and Policy Studies, California State University, Northridge
Jill Jokela, MMSD parent
Charles Chapin, science teacher, La Follette High School

Support staff:

William Clune, Wisconsin Center for Educational Research (WCER)
Dr. Adam Gamoran, WCER
Angela Hoistion, SCALE Administrative Activities Manager
Dr. Terry Millar, WCER
Dr. Paula White, WCER

MEMBERS PRESENT: Charles Chapin, Jill Jokela, Eric Knuth, Jim Lewis, Mitchell Nathan, Merle Price,
Norman Webb (via one-way telephone)
MEMBERS ABSENT: Martha Alibali, David Griffeath, Ken Zeichner
STAFF PRESENT: Bill Clune, Steve Kosciuk, Terry Millar, Paula White
OTHERS PRESENT: Grant Goettl, MMSD High School Math Resource Teacher; Carrie Valentine, MMSD
Elementary Math Resource Teacher; Barbara Lehman-MMSD Recording Secretary

(meeting was conducted through videoconference and recorded)

1. Welcome

2. Approval of Minutes

The minutes from the Task Force meeting of December 18, 2007 were not e-mailed successfully and, therefore, approval was tabled. Mr. Price asked members to e-mail any corrections to Barb Lehman.

3. Finalize Work Plan

Mr. Price noted that he and Mr. Lewis would be providing an update to Superintendent Rainwater on progress to date based on finalized work plans.

4. Work Group Progress Reports on Defining Scope of Work

a. Curriculum Review and Research Findings

Mitchell Nathan proposed a change to the name of the Work Group to more authentically describe its intent. **There was consensus to accept the change in designation for the Work Group from "Curriculum Review and Research Findings" to "Learning from Curricula."**

Dr. Nathan described the five elements of the plan: curricula in use and experienced by students in the MMSD, impact of curricula on student outcome measures, measures currently in place to address differentiation of instruction, nature and interplay between procedural and conceptual knowledge relative to mathematics learning and testing, and how the work and findings relate to the investigations of other components of the Task Force.

Discussion:

- o Addresses the misconception that there is one curriculum. There are a number of curricula at play, with the exception of the narrowing down at the middle school level, but teachers are

- also drawing from supplementary materials. There are a range of pathways for math experiences. The work plan would give an overview by level of program of what exists.
- The question from the Board about whether it was desirable to have one or more curriculums would be addressed in broad terms. Dr. Nathan has been hearing both sides of that issue, even from the same corners. The report would give a summary of that issue but he did not know if they could make a recommendation or get that definitive. He was most familiar with districts where there is a lot of student mobility and the idea of continuity has desirability.
 - Mobility and professional development will also be addressed in the report. Mobility more of an issue on the east side than the west side of Madison.
 - Normal to have a plethora of curricula. Complicates whole standards-based approach. Most of the larger-sized districts have a variety and teachers have a lot of autonomy with supplementing.
 - Fidelity of implementation is a key issue.
 - Different programs are piloted all the time and that will probably continue.
 - Could say that variety is good for children to have places to plug into. Could expand on the normative idea of purchasing commercial curricula vs. richer, in-house materials. Standards tell the teachers what needs to be taught. Published materials often are missing some aspect of the standards. District tries to define core resources; guides that help people with classroom organization.
 - Materials will bring district to a certain place then it falls on teacher knowledge. Professional Development is broader about what math knowledge is.
 - Cannot bring in the enacted curriculum to reach a conclusion on whether it has a large influence.
 - Have to frame all these issues as part of a system.
 - Mr. Sniff brought the materials about the standards where one might go for resources. They are also posted. People can go to more than one place to cover the standards.
 - Diversity of resources is out of response to student needs. Do not see how one curriculum can help.
 - District wants the teachers to know their subject and their students very well.
 - District cannot keep class size low and consistent without combining classes; multi-age with two curricula based on materials vs. what the children know.
 - Have to meet the students where they are as a foundational principle.
 - Group can report out on what the research literature says relative to the effects on learning of the curriculum and other factors, i.e., how instructional process is going, family factors, school factors.
 - Want to include a summary of the NRC report that came out in favor of Connected Math but was not conclusive—cannot control for teacher effects, positive effects of all curricula, etc.
 - Would like to give some portrayal of the opportunities for accelerated performance—want to document informal ways things are made available for differentiation.
 - Nature of interplay between conceptual and procedural knowledge—getting back to basics vs. new math. Want to get at the literature on that.
 - Also helps to say why there are choices that get made around things. If the district is aware of this issue and take steps, it would be interesting to know that. If some curriculum has a weakness, then what the district does.
 - To what extent does the district supplement based on assessments vs. standards? If you broke down WKCE by grade, they are very closely matched. Predictions can be made with regard to performance.
 - Board raised concerns about Connected Math and Core Plus.
 - Study done 4-5 years ago by Colorado State that looked at calculus showing no difference on the exams for procedural but there was conceptually.
 - Group's work needs to interface with the other working groups.

There was consensus to accept the five elements and action plans as the scope of work for the Learning from Curricula work group.

Mr. Price assigned these tasks to Dr. Nathan who was asked to update the actions based on today's input and forward to Mr. Price.

Mr. Price clarified that the number of Task Force members who could meet without crossing the official meeting threshold was five or less.

b. Instruction and Teacher Preparation

Mr. Knuth distributed a copy of the Group's scope of work and proposed report (a copy is attached to the original of these minutes).

Three main areas: Research and professional organization recommendations; Middle school mathematics teachers' mathematics preparation; and Mathematics professional development opportunities.

Discussion:

- ❖ Include elementary math targeted at middle school, e.g., Math Masters. There is information out there to address the Math Masters program and its effect on student achievement.
- ❖ Mr. Millar suggested several levels of analyses.
- ❖ Mr. Clune agreed that there should be more about the teachers than the students.
- ❖ Issue of ideal teacher qualifications in Section 1 – not definitive research but it will address best practices in terms of preparation.
- ❖ Data are available to conclude that there is equity in terms of resources.

c. *Analysis of Student Achievement*

Bill Clune spoke to Norman Webb over the phone. Mr. Webb reported that the working group's outline was distributed at the last meeting and the general format was acceptable. Components: status of student mathematics achievement, attainment of students in mathematics, post-secondary mathematics performance, questions to be answered from existing data, and recommendations for future studies and data collection.

Discussion:

- All the data will not be available by May but may be in June.
- Kurt Kiefer has all the MMSD data. He stressed the diversity of the student body and how that has changed; seems to dovetail with the discussion on curricula.
- Need the number that reflects annual growth of how the students are doing that is not available right now. Also do not see evaluation of the outcomes of curriculum, i.e., Connected Math. Mr. Kiefer says the data is not there yet. Dr. Webb also commented that it is too difficult to link the data to curriculum but noted that the district is working on a methodology that would allow this to happen later.
 - Study focus? Research shows the effect of curricula is very small; not much gain moving from one to another. Are we trying to evaluate how curriculum is implemented in Madison, e.g., Connected Math skills to get across?
 - Could take before-and-after Connected Math WKCE scores and look at conceptual and procedural thread. Would also have to look at other changes and how many years out is reasonable and fair. How it was implemented gets to be very complicated.
 - Mr. Kiefer said there is no way to identify who took what curriculum.
 - We should be looking for a model for evaluating?
 - Flagging it in the database.
 - Why not just look at those schools where it was consistently implemented? Want something concrete. Very labor intensive.
 - Did these children acquire the skills necessary or did they make adequate progress through the pattern of WKCE scores.
 - District will have trend data, including the period when Connected Math was implemented, and control for changes in demographics and see if there was a change.
 - No way to link students who took the WKCE with a particular curriculum experience. That kind of data table has to be built, including controls and something to match teacher quality.
 - May recommend that not worth looking at WKCE scores of CM student or a case study is worth doing.
 - Implementation and evaluation issues may come out in the survey.

Work plan was accepted, and Norman Webb was charged with the responsibility (in consultation with others), with the addition to further investigate, based on what is available from MMSD data, what can be reported on the effects of the implementation of Connected Math; and, if there is no conclusive evidence to be found, make recommendations for building such a data table or for a further case study.

- MATC should be tapped for post-secondary data collection.

d. *Survey of Teachers, Parents, and Students*

Paula White reported that the surveys are ready and printed and just about ready to send out. Key information to be gained from the surveys is how teachers, parents, and students perceive the quality and effectiveness of their curriculum and the challenges that teachers face. Drafts saw no more changes. She met with district office and UW Survey Center. The student survey is paper and pencil to be conducted at all five high schools. The Parent Survey will be mailed to the homes of 1500 parents of students across all grades currently enrolled in MMSD math classes. The Teacher Survey will be conducted via the district's web site using the Infinite Campus System. She detailed what the UW Survey center would provide. They will start this month and complete in April. All data is expected by the beginning of May.

Discussion:

- They will analyze and interpret the results and proposes recommendations.
- The working group will be closed out and Dr. White will be responsible for all follow up to the interpretation of the survey results.
- Determination will be made about whether the data and results shed light on some of the questions posed by the Board.

There was consensus to administer the surveys and do the follow up and analyses with respect to the questions that have been posed.

5. *Elements of Report to Board of Education*

- a. *Process***
- b. *Scope of Work Assigned***
- c. *Assignments of Responsibility***

Mr. Price indicated that after he and Mr. Lewis collect every working group report on their work plan (he hoped within one week), they would put together a Task Force status report and will share it individually with the members of the Task Force.

6. *May 2008 Presentation during a Public Meeting with the Board of Education*

Preliminary draft reports on all the work plans.

7. *Announcements and Future Meeting Dates*

Videoconference ended abruptly.

8. *Adjournment*

The meeting adjourned at 12:40 p.m. by the unanimous consent of those present.

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