

Olympia School District
Math Textbook Review
Minutes 4/24/06
DRAFT

At end of day of last meeting (4/7/06) Matt McCauley checked pulse of committee with question of where the committee stands with regards to traditional approach vs. constructive approach to math. 2 voted for traditional, 12 voted for constructive, 7 abstained.

Matt introduced Tricia Kelley as new Administrative Asst. in K-12 Teaching and Learning, then went around table with all in attendance introducing themselves.

Matt asked for brainstorm for initial questions and comments that might be directed to practitioners at this meeting. Following questions and comments were discussed:

Q: What are shortfalls of constructive approach?

It was discussed that there isn't enough emphasis on skill fluency and number sense, although this could be supplemented. Also, some issues with teacher comfort of new approach and parent familiarity. It was suggested that training for staff, and activities for families to increase familiarity could circumvent this. Also, noted that in the Assoc. for the Advancement of Science study and the Univ. of WA study conducted in 2000, CMP received favorable standing.

Q: What is the practitioners' experience with CMP?

Matt shared what he knew of the practitioners' experience. Bob Hughes with JMS has been using CMP this school year and is self-taught. Bill Sebring from Bush Middle School has been using CMP for the past year, since its adoption in the Tumwater School District. Patrick Paris has used CMP for 4 years in the Tacoma School District. Keith Barber has used CMP for 3 years and has also continued to monitor research concerning CMP.

Q: For students with accelerated math skills, how does the constructive approach work? Will this be a parent concern? Will we still offer accelerated math classes?

It was discussed that there are different approaches at different districts, and that this is something that can be discussed and structured to meet OSD's needs.

Q: What does data show regarding testing results?

Keith Barber responded that National Clearinghouse has an ongoing evaluation of how different curriculum programs are doing. They have consistently verified results that CMP is productive in testing gains. They have been tracking results for 5-6 years. He has website address available that this information is posted on.

Practitioners were introduced and asked to give a brief overview of their experience with CMP.

Bill Sebring – He has been teaching math for 20 years and has been with Bush Middle School in the Tumwater District for 11 years. Prior to working for the Tumwater School District, he was teaching in Bellingham. While in Bellingham, they adopted CMP; however, he left that district before the adoption was implemented. In past years, he has included pieces of CMP in his class curriculum and has been formally using CMP since its adoption in the Tumwater School District last school year. He and students have had some challenges in the transition to CMP, mostly due to it being a new way of teaching/learning.

Bob Hughes – He has been teaching for about 30 years. He was at LP Brown until 2 years ago, and is presently teaching 6th, 7th and 8th grade math at Jefferson Middle School. He teaches traditional math at 7th and 8th grade, and CMP at 6th grade. In his experience in teaching traditional math at LP Brown he found that while students tested well, they had

problems with applications. He began teaching traditional math at JMS and became frustrated with how to help kids who were struggling. Ericka Boysen proposed he look at CMP, and he agreed to pilot CMP in a 6th grade class this year for struggling students. Much of his training has been self-taught, along with participating in trainings offered by Tumwater School District.

Patrick Paris – He has been a teacher, trainer and facilitator with the Tacoma School District. Tacoma School District adopted CMP in 2000-01. He was part of review group for this adoption. He trained staff in CMP for 1 year, then went back to teaching CMP in middle school for 2 ½ year, until returning this year to working in the district office.

Keith Barber – He is a teacher at Boston Harbor. He has used and reviewed research on CMP for 3 years.

Committee questions to practitioners

Q: Do students have any problems with readability with CMP?

Patrick: Readability has not been an issue. Many components of readability, such as context and prior knowledge, are built into CMP. He referenced “Teaching Reading in the Content Areas” by Rachel Billmeyer.

Q: How prepared are students for high school math?

Patrick: Tacoma has adopted IMP at the high school level. However, they still have the traditional Algebra-Geometry-Algebra II track. The integration from CMP to IMP has been relatively good. For the most part he has found that kids at high school are successful whether coming from a traditional approach or from CMP. The teachers at the high schools who have reviewed CMP are satisfied with the level of Algebra and Geometry being taught.

Q: Is your district only using CMP in the classroom?

Patrick: All grades are using CMP, with some exceptions of traditional track classes for advanced students.

Bill: Tumwater is using only CMP at the 6th and 7th grade level. 8th grade is still Algebra I. Next year all grades will be using CMP, with an advanced CMP class at 8th grade level. They will also still offer Algebra I (for approx. 25% of students) – partly to meet parental demand.

Q: Are students intermixed in classes by grade?

In both Tumwater and Tacoma, CMP is by grade level with a few exceptions. CMP does however lend itself to a mixture of skill levels.

Q: Do students like CMP – what is their attitude about CMP math?

Bob: His 6th grade class at JMS was made up of students with low level performance and attitude. It has brought new life to these kids. They feel very successful. When asked by a school board member how they liked CMP – close to 100% feel successful, like homework and like CMP. There is a lot of talking/dialogue about how and why and real life applications.

Bill: In general the response from the students has been very positive. There are still a few who miss and prefer the traditional approach. Most think CMP is easier to understand – it has context, is about real life, makes them think and talk more.

Q: How does absenteeism affect lessons?

Bill: Working with partners/groups helps with missed lessons/information, but frequent absences can be a problem. Frequent absences would still be a problem with traditional math

approach, but is probably more difficult with CMP. It sometimes requires him to work before/after school with students to walk them through what was missed.

Keith: It will become less problematic as kids have more experience with CMP and with understanding the concepts.

Q: How does elementary curriculum affect the transition to CMP?

Bob: Many students in his class have not had Trailblazers and it has not been a problem. He doesn't see a difference between the kids he is teaching who have come from a traditional approach vs. a constructive approach at elementary level.

Patrick: Kids coming from Math Trailblazers or constructive approach may have an easier transition with the writing piece and thinking skills approach used in CMP.

Q: Has CMP had any impact on student performance in the WASL?

Patrick: Tacoma's WASL scores have gone up every year since the adoption of CMP. Every demographic group has made substantial gains in WASL results.

Keith: Clover Park has also seen substantial gains.

Q: What 'holes' do you see in CMP?

Bob: The need for more time, JMS has 55-minute class periods. The middle school schedule is too rushed. The students have also expressed the need for more time, so there is more time for discussion in class. The first month of use is difficult...it is laid out strangely.

Patrick: He agrees that time is a problem. Tacoma has 54-minute class periods. They have increased one class by 25 minutes and will be looking at this class to see if increasing class time will make a difference. There are also some holes in content. This may need to be supplemented.

Q: How important is it to ability group?

Bob: Somewhat important, but the curriculum discussions are enriched by a wider range of abilities.

Patrick: Yes, there should be some, but CMP does lend itself to a spread in ability. The homework provides for the levels work.

Q: What kinds of supplementals do you find teachers need?

Patrick: Tacoma as a district does not purchase any supplementals. The individual teachers have, and these supplementals tend to be class opener type items, used as 5-10 min warm up at the beginning of class. CMP2 is better and has extra practice work available.

Q: How much training is needed? How do you train new teaching staff? How does CMP work for substitutes?

Both Tacoma and Tumwater had initial training of 1 week in the summer, followed up throughout the year (3-4 per year) with trainings as new units are presented. The initial training covers how to use the book; it covers all grades. At follow up trainings, staff can review, discuss and talk about pitfalls and highlights of the coming unit. New hires go to 1 week summer training.

Bill said that for his substitutes he has them use review worksheets and work on skill development with students.

Q: Retention of learning...what do you see from CMP vs. traditional approach?

Bill: Many of his students in Algebra I can recite equations and do the work based on the equations, but they do not know what it means and how it relates to real life situations. With CMP the students may not remember the equations, but all his students can talk through a real life situation and understand the concepts of how to get to the answer. There is better retention of concepts...the difference between doing vs. knowing.

Patrick: Many of his students understand relationships and 'discover' the formulas by working through concepts with CMP.

Q: How is student performance for college entrance affected by CMP?

Patrick: Tacoma will be looking at the SAT scores to evaluate this. They don't know yet. However, prior to CMP a larger number of their students going on to Tacoma Community College were placed in remedial math.

Q: How do you deal with group work vs. individual accountability with CMP? How can you evaluate individual progress?

Bob: Cooperative learning used in CMP has built in checklist to assess individual students. Teachers check in with groups and gather data as to how kids are doing. Students work in groups, but teachers are "active" monitors.

Bill: CMP uses a combination of group and individual quizzes. Students having problems show up through these individual quizzes.

Q: How would you recommend implementing CMP?

Use GLE's as a guide and either implement by staggering, i.e. year 1 – 6th only, year 2 – 6th & 7th, year 3 – 6th, 7th & 8th, or you could just begin the year by having CMP in all 3 grades. Implementing all 3 grades in first year is challenging, but both Patrick and Bill feel the benefits justify this. Also still offer some other track for advanced math students.

Q: Once implemented, how do you see it progressing with advanced classes?

Patrick: Tacoma has still offered advanced classes in Algebra, and it has worked fine.

Bill: He would like to see advanced classes as advanced CMP classes. These classes would progress more quickly and would cover all 8 units in 1 year.

Q: For 8th grade students, has there been any problem with the transition of one year only of CMP, then back to traditional math at high school?

Patrick: He has not seen any problems with this. In fact he thinks CMP has been beneficial.

Closing remarks

Bill: His students say CMP math makes sense. They see how math can be used everyday in real life.

Bob: If OSD moves into this, they need to give teachers plenty of support and training. Whatever decision is made, he would like to see OSD set up benchmarks and review these over 3-4 years to see if the math curriculum is working. He believes CMP has given his students strength and confidence and has been worth the challenges.

Patrick: Of the all the math curriculum changes that Tacoma School District has made, he has the most confidence in the CMP curriculum. It has brought professionalism to math. In meeting and discussing these math concepts, it has strengthened their teachers.

Practitioners were thanked for their time, and left the meeting. Discussion of presentation followed.

If we choose CMP, how would OSD support this with training?

- One teacher would be hired / TOSA expert to support teachers and if needed to help initially in the classrooms
- June staff development for overview of CMP. Then in August, grade level trainings. Total of 3 days.
- Some funds will be available to compensate teachers for their time in reviewing CMP over the summer
- Once a month trainings of new units

- Would also encourage PLC groups to use staff development hours
- Might also consider offering training to substitutes.

Theresa Tsou shared research reports from the Department of Applied Mathematics at the University of Washington and <http://www.kuow.org/weekday.asp>. She highlighted concerns about CMP: Students wishing to take calculus before the end of their 12th grade year may not be on track to do so after completing 8th grade CMP. It takes more time to train and more time to teach. What is the reliability of studies done about CMP?

From all of this.....What Do We Know?

- We need a balance of application and skill development.
- Students need to be prepared for high school math.
- Students need to be prepared for the WASL. They need problem solving and CMP has that.
- We still want advanced opportunities, so how do we work CMP into Algebra and Geometry for advanced students?
- Instruction of teachers is key. It is as or more important than the curriculum.
- Constructive approach works well for mid to lower level students.
- Math support science, therefore applied math is important for future science success.
- We need to support parents with any changes to our curriculum.
- Two research studies ranked CMP high by NCTM standards.
- If we adopt CMP the transition from elementary to middle school math will be smoother.
- The OSD test scores are already pretty high.

Comments were encouraged; comments that might influence others either way.

- We are looking at programs to work for lower to mid level kids. These are the kids we are losing. We need to do something different.
- So parents understand the benefit of CMP, we would need to phase it in.
- Could we achieve the same goals with more training, but staying with the same/more traditional approach?
- Bob went from a traditional background to CMP with little training, and loved it. It was easier to go from traditional to CMP than from traditional to Trailblazers. Kids loved CMP and it was fun to teach.
- It is easier to have our curriculum be constructive and supplement with skills based, than the other way around. Skills are easier to supplement.

Matt asked for a vote, with no abstaining. Vote was taken. 15 voted for CMP, 4 voted for traditional, 1 abstained.

Chris Mondau expressed his dislike of voting. He prefers consensus model and would like to withdraw his previous vote.

Matt McCauley expressed that the vote was not intended to be a win or lose situation, but that time constraints require a decision be made.

Kelly Pankau proposed that we have someone who did not vote for CMP be on the presentation panel.

Malinda Lamm expressed her frustration with time constraints from the school board.

Eli Normoyle felt that time constraints are a reality and we need to progress. It is frustrating to not move on and get the materials in students' hands.

Joni Wolpert is understanding of time constraint issues, but feels we would still be in the same place in the coming months even if we continued to meet.

Matt McCauley stated that any process has faults, and may not be as complete as some would like. He has appreciated the involvement of all and the frank dialogue and cooperative nature of the group. It has been a healthy process. We can only make the choice we see as best and try it. He has heard great things about CMP and thinks it is a great direction to go in. This adoption can be proposed to the school board as consensus if this is what the committee wants to do.

The committee agreed they can propose this decision as “the committee recommends to adopt CMP for middle school math curriculum.”

A group is needed to present to the Math Taskforce on May 3rd and the Olympia School Board on May 8th. Matt McCauley, Monica West, Eli Normoyle, Jennifer Anders and Marta Gomez-Buckley volunteered to make this presentation. They are scheduled to meet on Friday, April 28th, 12:30pm to put together this presentation.