

Thank-you for your e-mail and perspectives regarding our Math adoption. The committee is currently reviewing all of the survey and student achievement data from the pilot and will be making recommendations soon.

Dr. Amalia Cudeiro
Superintendent

To Whom It May Concern

I, ..., would like to express my support for the Holt math program that is currently being considered for adoption. Holt is most aligned with state & national guidelines and is better suited to prepare students to be successful in college math courses.

Hi

I am a senior user researcher at Google in Kirkland. I have been attending the math meetings & school board sessions, have reviewed the textbooks, have read through the comments online, etc in an attempt to stay informed about the math textbook adoption. I recently started an email thread at Google about the state of math in this area. The email generated a very lengthy discussion about math standards and others' experiences with Discovering math... here are some excerpts:

My kids are in LWSD and they use the Discovering books. They are awful. Imagine a geometry text book that doesn't actually tell you any of the postulates or theorems of geometry. They all appear in the book like this:

Through any two points there is _____

... Which brings up one more point -- they label all postulates and theorems as "conjectures". Understanding the difference between a postulate -- something we assume to be true to build geometry -- and theorems -- things that we can prove from the postulates -- is pretty damn important.

My son actually found out he was good at math once he left a program using Discovering Books. That program is awful!

[Discovering Math] would ensure that all students had equitable access to a balanced and rigorous mathematics experience. What's not to love? Everybody would be equally unprepared at the end of the road.

BTW, did you see Cliff Mass' blog post on "How Good are UW Students in Math?":

<http://cliffmass.blogspot.com/2010/01/how-good-are-uw-students-in-math.html>

He's got a great 1-page math test to assess incoming students. Here's a link to the test:

<http://www.atmos.washington.edu/~cliff/UWMathTest.pdf>

Overall grade for this test is 58%.

Thanks for your thorough analysis of the data. I will be meeting with Sharon Kautz and curriculum folks to review.

Dr. Amalia Cudeiro

In researching the math curriculum issue I have found two important areas that must be addressed:

(1) Bellevue School District had a Math WASL passing rate averaging 20 points **higher** than the state WASL passing rates for math in middle and upper grades over the past two school years. No one would, of course, say that a 70% passing rate means that the job is "done". However, this 20+ point average passing rate indicates a successful approach that is working for most students.

Consequently, I am absolutely perplexed by the current urgency around adoption of a new curriculum AND I am absolutely perplexed by the two choices the district search committee has landed upon. Was CorePlus even considered? If it was not, given our WASL data, I do not understand why it was not. Both of my children have done very well with the integrated curriculum. However, if children are not doing well in math, and it is clear that some of our Bellevue students have not done as well, does it necessarily follow that the curriculum is to blame? Wouldn't it be the result of a myriad of factors? I maintain that it is impossible to isolate curriculum as the reason why children are or are not doing well. It has been a combination of curriculum, **teacher training**, community attitudes promoting math learning, district administration's support of Eric McDowell's work to bring current practice to our district, and much more which has brought us to our current level of success. Why don't we build on all of that excellent foundation and take time to search for a curriculum that will benefit most of our children? **Further, it is frankly offensive that with enormous looming budget cuts the Bellevue School District would even consider spending thousands of dollars on new curriculum when industry leaders have told the adoption committee that, "districts that care will wait" for the new national standards to be assimilated by the curriculum companies.** Don't we care?

(2) Differentiated instruction. Much talk has been bandied about regarding "differentiated instruction". There is a lot of information available about this "hot topic" but that very volume of information makes it imperative that, as a district, we take the time to examine this idea before we rush into anything unprepared. Ironically, from my limited exposure to this topic I find it to be diametrically opposed to both curriculums that BSD is considering for high school math. Differentiated instruction appears to mean that the teacher should be given wide latitude to instruct students in all topic areas using a wide range of *student interest tools* such as games, hands-on learning experiences, physical movement, song and other interactive experiences. All of these tools are meant to engage students at their own level and allow them to progress to the next level at an individual pace. Where is all of this in Holt or Discovering? I don't think we see much of this anywhere above 5th grade in the Bellevue School District. Teachers are required to adhere to strict pacing guides and very few curriculum coaches are adding games and songs to the math or science instruction. ***If we are going to immerse ourselves in differentiated instruction why isn't that the top priority in our curriculum search: finding a high school math series that meets the new national math standards currently being developed AND clearly explains to instructors how to differentiate instruction every day in their classrooms?***

As a parent, as a math teacher in this district, and as a Bellevue resident for over 40 years I say "STOP". Back up and figure out what will really make Bellevue School District the best. There are thousands and thousands of families in this district. Do not make the mistake of listening to a few, vocal people. In a democracy we have the obligation to listen to everyone. So please listen to me and to others who believe as I do, no matter how small the number who are speaking up. ***Please consider extending the high school math curriculum adoption process for at least one more year in order to correctly align our program to the new national standards and to differentiated instructional practice.***

Thank you very much,

Dear Members of the Bellevue School Board, Math Adoption Committee and Dr. Cudeiro,

I am a parent of two girls in the Bellevue public school system and a past graduate of Interlake high school. Following graduation I attended Wesleyan University and then completed an MD, PhD program in Wisconsin. I am currently a faculty member at the University of Washington and Fred Hutchinson Cancer Center. During my education I have come to realize how important a strong background in Mathematics is to a career in Medicine and Science.

I am writing to express my extreme dissatisfaction about the entire process for selecting a new Math book for the high school classes. I just viewed the results of the pilot studies and surveys that were posted online. I was appalled to see how biased this selection process is. The surveys given to the students and teachers primarily focus on how much discussion, group learning, and investigation is presented in each book instead of how much learning and understanding is accomplished.

"How often were you listening to the teacher explaining math?"

"How often were you working on an investigation, lab or exploration?"

"How often were you working independently?"

"How often were you working with a partner in a group?"

"Materials foster the development of rich mathematical conversation in the classroom"

"The program is designed so student are active learners who are involved in investigating mathematic patterns in order to acquire new concepts."

The question should be which series is better to educate our children, and not which series presents more of an investigational approach. We all agree that the Discovery series presents a pure investigational approach while the Holt series presents a more balance approach.

In reviewing the surveys and comments from the middle school teachers I was also disappointed to see how little consideration was given to this selection process. Many of the teachers filled out low scores for the Holt series in almost every category in an effort to eliminate it from consideration. I think we all will agree that there are many basic differences between the two approaches. The Discovery series offers a pure investigational approach while the Holt series offers a more comprehensive approach including a combination of traditional mathematics and investigational problems. Many of the teachers did not seriously consider the merits of each series and chose to rate the Holt series as poor

in all categories including the few questions where the Holt series is clearly superior. I understand that as a parent I have a minimal impact in decisions regarding how my daughters are educated in the Bellevue public schools, but ask why those who have the responsibility for these choices have implemented such a biased process by not properly investigating and considering all of the merits of the two options available.

Similar to many other parents I have had to supplement my daughters' education in both Math and Science because the strong emphasis on investigation has replaced the teaching of basic mathematical principals and scientific facts. My daughter, who is using the Core Plus textbook, often says that the questions are purposely vague and that she does not feel she has a strong grasp of the material. I am surprised that after the poor performance on the Math WASL, and wide spread deficiencies in basic math reported by many of my fellow college professors, that anyone would continue to support a pure investigational approach. I had assumed that all were in agreement that there should be a significant change in the way math and science are taught in the Bellevue school district. The Math expressions adapted by the elementary schools is a step in the right direction. I understand it may be satisfying for teachers to have the students discuss the problems in an investigational approach. However, the goal of school is education. The investigational approach has led to severe deficits in basic math knowledge requiring many students to relearn math in remedial classes in college. The best approach would be a combination approach that fosters a strong mathematical background while allowing some additional time to be spent in *higher *order learning. This is what the Holt series provides.

Hello,

As a parent of a 9th grader at International School, I am interested in the choice of math curriculum being made by the Bellevue School Board this year. I knew nothing of the Holt or Discovery curriculum prior to attending the meeting at Wilburton Instructional Center. There, I had a chance to examine the texts briefly. More importantly, I listened to presentations by Sally Rafferty, Bob Brandt, and Dr. Cliff Mass.

After listening closely, examining the text further and reading the feedback of reviews, asking questions and hearing answers to many other questions, I came away with the belief that the Holt curriculum will better serve the needs of our students. Since the meeting, I have asked parents on the Bellevue Schools Foundation what their choice would be after having examined the text at greater depth than I had done at the meeting. Both of these individuals expressed strong preferences for the Holt approach, feeling it to be better organized and accessible as well and giving opportunity for mastery through more examples and exercises than does Discovery. My concern, too, revolves around the greater use of complicated language in story problems that seems pervasive in Discovery. Many BSD students are non-native English speakers. I believe the Discovery curriculum would put them at a particular disadvantage.

Dear Adoption Committee Members,

I am a parent of an eight grade student from St. Louise School coming to Newport High School in 2010. After reviewing both proposed Discovering and Holt textbook material, I strongly believe that **Holt is a better choice** to achieve "top-of-the-line college preparatory education."

Our children should be able feel competent at school, in college and everywhere with their knowledge. After studying math in Russia, I feel that I can apply my math knowlage anywhere in the world. I believe that Holt textbooks adoption will give this chance to my daughters, too. I do not have enough confidence about Discovering Series.

To the Superintendent, School Board, and Math Adoption Committee:

I appreciate having the opportunity to provide my **comments about the Grade 8-10 math curriculum being reviewed for BSD**. I am taking the time now, out of an extremely busy time at work and at home for me, to express my opinions here. I thank you in advance for taking the time out of your busy schedules to consider them.

I am a parent of three kids – one in 7th grade, one in 5th and one in 1st. My 7th grader is in the PRISM program doing 8th grade math. My 5th grader is part of the intensive Math Olympiad program. I have reviewed the curriculum being considered, attended several meetings on the subject, and feel I am well educated on the subject. I have watched many many families in Bellevue tutor or home school their kids in math because they have not felt that the schools are helping their kids adequately in this subject. Although I am seeing an improvement in the elementary curriculum my youngest has from the one my oldest two had, we have also felt the need to supplement at home, even if this invades on our precious and limited family time. I have a Master's Degree in International Economics.

My two older children are dramatically different – in personality, learning styles, ability, interests – just as kids are in every classroom. We all know that no curriculum will be best for all kids. The teacher's interest and ability in math dramatically affects student outcome as well, as you well know. Here are the points I have to make:

- I believe that the **Holt curriculum** will more effectively teach our kids by providing a strong foundation. It provides more time to practice computation, provides examples in the text and with good, straightforward, easily accessible online videos, and should help students understand concepts more deeply so that they then can then apply that knowledge to “real world” problems. They still must think hard to apply that knowledge. Many, many kids lack to patience to do it the other way around – understand how to figure out the “real world” example before they have the tools. While Discovering appears to be an improvement to the current curriculum, it still teaches concepts in that way. Both “abstract” and “real world” (for lack of better terms) are important, but what I’ve seen happen with the math curricula that is more discovery based, is that, while it may work for some kids, a majority of kids get very turned off to math. A good math curriculum and teacher knows to integrate both types of thinking/learning into the classroom – but I do believe it needs to start with the basic, perhaps “abstract” concepts – with the ability to know the rules, compute confidently – and quickly – and then to apply them and think about them in different ways.
- I believe teachers need to **share best practices**, which would use our limited time and resources more efficiently and effectively, and stop reinventing the wheel. One of our teachers said that my daughter needed extra challenge in math, yet didn’t consider asking the Enrichment teacher or having me email Stevenson’s PRISM teachers for supplemental materials. I was glad to hear that Superintendent Cuero believes this as well; I hope teachers can be rewarded in some way by working more effectively together! We need to find creative ways to succeed. Perhaps some parents, if asked, would provide funding for our best teachers to go to these successful districts and learn. Why not ask? Also, we have award winning teachers in our district – like Mrs. Kohl – and other teachers could be learning from her.
- I am not entirely happy having to choose between Holt and Discovering. I believe we should have looked at **successful districts** throughout the United States and emulate them. We cannot afford to waste our precious time and money and other limited resources reinventing the wheel. Yes, states differ in funding education and in other ways that give more flexibility to some districts than to others, and yes, some districts are demographically different from ours, but why not start with what has worked in several locations elsewhere? There are some districts in Massachusetts and I believe also in Northern Virginia that are doing exceptionally well in teaching math to their kids. These are the kids our kids will be competing against for college and for jobs.
- Once we decide which curriculum to use, I would hope that we can **transition** the kids using the existing curriculum over as soon as possible. I know this is not an easy task, but these kids need to be able to take advantage of this improved curriculum as soon as possible. I know that many parents would be willing to have their kids work on summer packets to fill in the gaps -and there are parents who would help tutor and/or put those summer packets together if asked.

My family’s experience: My son has had an entirely different math experience from my daughter, far superior, since his teachers have taken great pains to find supplementary materials that enhance the current curriculum, and have required sufficient practice to master the concepts before moving on. These materials provide examples on how to think about a new concept/how to do the computation and then provide much needed extra practice. My daughter has none of the extras, is very turned off by the current teaching method where there are few examples, weak teacher support, and is not doing very well as a result – even though she is perfectly capable (loves to learn (all but math now), is in Enrichment). The teacher even let parents and students know in Sept that there would be many homework assignments where they would not have been introduced to a concept yet and just to skip those – but they aren’t told which ones to skip. So my daughter can agonize and be in tears over a problem, ruining her self-esteem, confidence, and energy for math, just to go in the next day and be told she should have skipped it. I know she is working with neither Holt nor Discovering, but this re-emphasizes the need to have a curriculum that is clear, provides examples, and gets to the concept more directly. The alternative is extremely detrimental; I can provide numerous examples where the current curriculum and teaching methods have failed her. We are currently using some Holt videos to help with the new concepts she’s being exposed to in Math Olympiad, and they are helping. It looks like Holt will also stretch the kids to think about the concepts in a different way. My vote is for **Holt**, and for finding creative ways to improve math teaching.

Thank you again for your time.

teaches engineering at the U of W and tells us that students come poorly prepared for college courses. Computation skills are just not being taught well enough. I have looked at the books you are considering and feel that the Holt series is the better choice. In addition the State Office of Public Instruction has said that the Discovery Series is NOT mathematically sound. It is no wonder that companies such as Microsoft have to hire workers from foreign countries because “educators” in the US fail to teach our students as they should. You have an opportunity to make a difference in how math is taught in Bellevue for years to come. I certainly hope you chose the Holt Series so our youth have the opportunity to compete in the job market in the future.

Thank you for your consideration.

Bellevue

March 1, 2010

I sent the above letter to the Math Adoption committee on Jan. 25th. It is my understanding that the committee still has not made a decision in spite of all the testimony against the "Discovery Series" and for the "Holt Series". The Seattle area is full of industries that are math based as well as a fine University with outstanding professors of math and engineering - the committee seems to disregard these people who know what students need to be taught in order to fill the jobs of the future. The people of Bellevue pay high taxes and expect to have excellent schools. Many years have been wasted by teaching TO a useless WASL test and now have a chance to choose a better course. Parents should not be asked to pay more to have their students tutored because they are not taught the subject in the regular classroom. I hope my name will be added to the list of those who want the committee to choose the Holt Series.

Dear Math Adoption Committee, Superintendent, and School Board,

Comments regarding the new math curriculum for grades 8-10

First, thank you for making this such a great school district. We feel so lucky to be a part of the Bellevue School District and appreciate all the time and energy everyone puts into all the programs here.

I have tried to be as involved as I am able in the Math Adoption process. I have attended the initial math meetings, reviewed the math adoption web site, reviewed the books and attended the parent math meeting, too. I found all extremely helpful in trying to grasp all the information that has been put out there.

One area I focused on was looking for what resources are available to the students and parents to help them grasp the math concepts outside of class should the students come home without full comprehension. I know the BSD curriculum web very well and have followed its changes over the years. I also took the time to look and evaluate both textbooks (only the student version) for how they explain the problems within the book, and what available online resources there are. In my opinion, the presentation of the math concept within the text **AND ESPECIALLY THE ONLINE VIDEOS** for the Holt books are much easier to follow and I feel will benefit the greater population of the district than the Discovering book. If the district goes with the Discovering textbooks, it is my opinion that videos (like there is already on the curriculum web for the sixth and seventh grade math) will need to be developed to explain basic concepts as I found the Discovering text not sufficient. With Holt, this is already done, the link is on the homework page, very easy to access, and it is **directly applicable** to the homework reinforcement my child will be working on. My child doesn't have to go to the teacher web site in hopes they have posted a link, or sign into the curriculum web with my user id and password, and search to find exactly where the class is on the listing of modules.

The traditional and discovery math debate has always tired me. I do think both have value. But, for the first time, I see how the presentation of concepts and the use of graphic calculators with the Discovering texts may be a detriment to the long term math comprehension of our kids. I am an accountant and live in a formula driven world for my financial analysis and computer system integration. In discussing the textbooks with other professionals (including doctors, engineers, health scientists and programmers), they all agree the Holt presentation is more applicable to the working world these kids will be entering. Our district has prided itself on looking to the "long-term" and the best education for our kids to succeed in college and the working world. And **I have yet to meet someone** who is passionate about the Discovering textbooks as most applicable to their world after they leave the K-12 educational system. That highly concerns me.

I am a strong supporter of the Holt textbook. Thank you for your time to listen to my opinions and concerns.

My name is My husband (...) and I have a 6th grade son in Tyee Middle School; he will be taking 8th grade next school year. Thus, as parents we have a vested interest in advocating the adoption of a math textbook series for 8-12 grades that will have a positive impact on our son's math education. We urge that the Holt Series be adopted for the reasons stated below.

My husband and I have looked at both the Discovering Series and Holt Series. The Holt textbooks present a solid math curriculum with a logical order, clear lessons, adequate practice leading to mastery, and assessment that are frequent and helpful. It even has connections to the real world. Key concepts are sufficiently highlighted. There are clear examples with step-by-step shown. My son will be able to sit down and do his homework mostly by himself. When he needs help, my husband and I can easily navigate the text to see how the lessons were taught, what the examples demonstrate and then know how to help him. In comparison, the Discovering Series lacks clear guidance on key concepts, there are no clear examples, and the material contains too much English. If my son needs help, I doubt neither my husband nor I will be able to help him since the Discovering textbooks do not present what math concepts students were suppose to have discovered on their own.

We have also heard testimonials from high school students who piloted the Holt textbooks and then went back to the Discovering textbooks. These students said the Discovering text was fuzzy and they were confused about what they were supposed to have learned. The group discussions in class did not help the students because the students just copy what the smarter student in the group came up with. In comparison, these students like the Holt textbooks because the lessons were easy to follow along and there were clear examples. They could do the homework on their own.

In conclusion, my husband and I strongly urge that the adoption committee recommend the Holt Series. Thank you for your consideration.

I am writing this to urge you to listen to the parents of Bellevue School Districts children. **I am letting you know as a parent that Holt is my choice for moving forward in mathematics.** I hope that you will look at all the evidence based information that is available to you and make the right decision for our children. Thank you for your hard work in wading through all the political red tape that comes along with adopting a new curriculum.

Math Adoption Committee,

I hope the parent meetings haven't been just a show.

I have been following the math adoption process and get a strong feeling that the curriculum has already been chosen, "Discovery".

I have gone to many meetings and have talked to many, many parents, students, teachers and tutors about math. What I keep hearing is that people want the new curriculum to have a book for each student, to have several examples problems, to have plenty of practice problems, (yes, even the students want this), to be strong mathematically and to have more numbers than words as not to discriminate against ESL or students who struggle with reading. If you are truly listening to the pleas of the people the Holt curriculum would be your choice.

I hope the Adoption Committee and the School Board will have the courage to choose the curriculum that best fits all. The Discovery curriculum is comfortable because it is like what we have. However, we want better, choose Holt.

Dear Bellevue Math Adoption Committee -

I am a parent at Cherry Crest Elementary school and Odle Middle school currently have a 4th grader and 6th grader. Both of my children will be affected by your decision on the new high school math curriculum. Several years ago various unhappy parents started an initiative at Cherry Crest to look for a new math curriculum and were extremely happy when the district decided to pilot Math Expression in Elementary and got adopted after a real successful year. My son was lucky enough to be in one of the piloting classes and the kids including the teacher loved it.

I am very excited to see that the district is now considering a more traditional Math curriculum for High school as well. I am definitely for the Holt Series.

On the other side, I was also shocked to find out that when my daughter moved on to Middle school that they still kept their old math curriculum and you don't seem to consider piloting another math curriculum which is very much needed. It is very surprising to me that the district is considering a new high school curriculum which I am all for it but leaving the Middle school in a complete hole. How do you expect these students to transfer over?

However, I still want to voice my opinion and say that I very much support the Holt Math curriculum which is more straight forward traditional math. I hope that the district will also change the middle school curriculum as soon as possible as well.

We have been very pleased with the Math Expression curriculum used the past 1.5 years and appreciated the involvement in our school in the pilot study. Math Expressions has a good mix of story problems and traditional algorithms taught in the earlier grades. The reinforcement used throughout the concepts and in the nightly homework sheets seems to give each child more confidence in math. My son does really well with it.

The Holt Math series should be selected for use in the Bellevue School District (BSD) to give our kids the opportunity to compete not only on a state or national but also on an international level. Being from Germany, I see the huge discrepancy in the Math curriculum between countries. I could never move back to Germany, because my kids would have no chance to catch up.

Thank you for your consideration,

Dear Members of the Math Adoption Committee,

As a concerned parent of 2 children in the Bellevue school system, I would like to express

my support for the Holt math program that is currently being considered for adoption. After reviewing the 2 math curricula being considered, I strongly feel that Holt is most aligned with state & national guidelines and is better suited to prepare students to be successful in college math courses and in any future careers requiring a sound education in math.

Committee members,

It has been over a month since my letter was first sent to you. To date, there has been no response to my letter. I have spent considerable time educating myself on the subject and would appreciate it if someone would respond to the points I raise. In particular, this sentence:

The parents and students of BSD deserve an explanation as to why you are considering a curriculum that nationally recognized mathematicians reviewed and found to be so mathematically unacceptable that the State Superintendent will not recommend it.

I hope my time has not been wasted.

Please adopt books that focus in ABSTRACT THINKING. I strongly support using books correlated to a Singapore-style program.

Currently there is an excessive link between LANGUAGE SKILLS and Math. Actual mastery in math should not be related to language, but to development of higher level of abstract thinking using Math itself as a language.

To Whom It May Concern

I, ..., would like to express my support for the **Holt** math program that is currently being considered for adoption. Holt is most aligned with state & national guidelines and is better suited to prepare students to be successful in college math courses.

I am currently a Math tutor for the VIBES program. I have seen kids and teachers struggle with the way the current program teaches. The current books fail to develop abstract thinking skills. I work for Google, and the current program is not adequate to prepare the next generation of engineers.

I understand that the Math Adoption Committee will be taking some additional time to review the survey data before recommending a particular Math Textbook series. Thus, I wanted to take a few minutes of your time for you to hear one more voice on this issue.

I have been a VIBES math tutor for 3 middle school students at Odle for the past 2 years. They all struggle to pass their math classes and all 3 do not meet WASL math standards. I also have 2 children of my own in the Bellevue schools – 7th & 9th grade. Both of my children get A's in math, and pass the math WASL. However my children differ greatly in the way they learn math; one is a more "natural" math learner and one has to work harder in math to master concepts. So when I spent several hours reviewing the Holt & Discovering textbooks both at a library and through your on-line links, I was looking at the textbooks through their eyes.

Unfortunately, I had once started to fill out the Textbook review form on your site, but after about an hour, I found it too limiting, got discouraged that it could not capture my input, and thus did not complete it.

I strongly urge the district to choose the Holt series for the following reasons:

- Holt has a clear format which is repeated for each chapter. Are You Ready vocabulary, Connect Words with Algebra at the beginning of the unit and then Vocabulary, Practice & Problem Solving, Challenge & Extend, Spiral Review for each section. The layout of these sections make me especially excited given BSD's new focus about differentiated learning. Not all students will be ready for Challenge & Extend... let them simply MASTER Practice & Problem solving. Holt had a lot of problems; I wouldn't expect teachers to assign all of these problems, but to tailor problem assignment sets to their individual students.
- Holt had pictures, diagrams, highlighted boxes which drew the learners attention to key concepts and provided "learnings" for students to go back to as they work to complete class work or homework. This is crucial – as you might be surprised how quickly kids forget what they learned earlier in the day.
- When Holt uses language, it explains it... e.g. "origami, means folded paper". In fact, everywhere in Holt there are mentions of Vocabulary, both math vocabulary and "story words" vocabulary. Bravo!
- Holt uses several "step by step guided" solving of problems. I know it is important for students to go beyond "rote memorization" of math skills and procedures, but we have to at some time show our students HOW to do a problem.

Discovering had several attributes which I strongly believe will have an adverse affect on our students specifically those who are in the Achievement Gap:

- Language – Discovering had far too MUCH language explaining the problems. I believe that students need to be able to master math skills and then once they understand the skills move to application in which they use these skills in complex word problems. In Discovering Algebra Lesson 2.1 More Practice, a table refers to “arachnids” and “crustaceans”. I guarantee every student I tutor would stumble over these words, which adds to general confusion and muddying about the math problem which is being asked. This kind of “heavy language” was throughout Discovering.
- Asking kids to “Write a Summary about the construction methods you learned in this section” is NOT productive. It’s not productive for my 2 children who are doing fine in math & passing state standards and it’s certainly not productive for the students I tutor who struggle with math. The question is too open ended, requires too much language to answer and does not really enforce concepts.
- Simply put – “Not enough white space.” I took a course in college teaching how to write user manuals. One of the main themes was have white space, delineating marks, highlighted areas, etc. to organize and present your information. Discovering is NOT student friendly in these areas. The students I tutor and my own children will not be able to use this text as a resource because it lacks in these important presentation attributes.

I started this email at 9 p.m. and I just spent another 2 hours reviewing the committee notes and survey data on the website from the 2 pilots and surveys. Whew! I concluded that Holt fared slightly better than Discovering. The most notable area was that Holt definitely fared better for ELL learners and other schools which have more achievement gap populations. I was left wondering if ALL students/parents in a pilot returned the surveys? If not, I would point out that higher educated parents and successful students tend to answer surveys, and we want to make sure to hear from our struggling student populations.

In closing, the Math Adoption site mentions “While the textbook is important, the most important factor for promoting student achievement is the quality of instruction that students get.” Although I agree with the idealism in this statement, the reality is that of the 5 teachers I have been exposed to this year through my own children and the 3 students I tutor, 3 of the teachers are very good math teachers and 2 are poor. The 3 good teachers send home additional materials, explanations, practice sheets they make up, etc. to supplement & strengthen the students learning. The 2 other teachers rely on the textbook 100% and thus the quality of student achievement for these students is exactly matched to the textbook. The Discovering textbook would not be enough in these cases. Learning would not occur. I understand that this is a harsh comment, but it is reality.

Thank you for your time reading my email and for your work on this committee,

2-28-2010

Dear Bellevue Math Adoption and Issaquah School Board Decision-Makers,

Please see attached four pages and attached Gap document.

MUST READ:

Educational Psychologist, 2006

[Why Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching](#)

MUST (MUST) READ:

[How Much and What Type of Guidance is Optimal for Learning from Instruction?*](#)

*For the past half-century, studies examining the interaction between student aptitudes and different forms of instructional treatments (most often called aptitude x treatment or ATI studies) have **consistently reported that students with lower ability levels and/or less prior knowledge and/or lower motivation are more vulnerable to learning difficulties when instruction is incomplete, unstructured, or gives inaccurate information** (e.g., Cronbach & Snow, 1977; Kyllonen & Lajoie, 2003).*

[ACT-R Learning Theory and Math](#)

One does read claims that such cognitive analyses are no longer relevant to the new curriculum standards but such claims are simply false. Instead, **we have found that the learning of the new curriculum consists of componential learning just like the old curriculum** (Koedinger, Anderson, Hadley & Mark, 1995). **It is every bit as important to practice these components of “new look” curriculum to achieve a high level of mastery as it was to practice the components of the “traditional” curriculum.**

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Decision-Makers,

Please intelligently apply relevant data in making selections of instructional materials.

The failure to use evidence is inexcusable.

Please read and use:

NMAP's "Foundations for Success" (attached)

and this document from the M.A.A. website.

[What is Important in School Mathematics](#)

I am a parent of a senior at Newport High School, and an 8th grader at Tye Middle School. I attended a forum on February 24 at the Wilburton Instructional Center whose purpose was to inform parents about the two choices of proposed math text books for our high schools (the Discovering and Holt books).

First of all, I really appreciated the chance to learn more about both books. Copies of them were available to look at, and there was a fairly good presentation made by one of the selection committee members that highlighted the structure and features of each textbook.

I have to say that the Holt books looks to me to be the superior book versus Discovering. Here's why:

- a. Holt does a better job of explaining the steps needed to solve different kinds of problems.
- b. There are more problems to work through and practice on.
- c. There is less English text, and more of the symbolic language of mathematics.
- d. It can more easily be searched backwards when necessary to find the material needed to solve a problem.

The last point above is due mainly to how well organized and focused the Holt book is. Topic headings are easy to find. The Discovering series on the other hand spends lots of pages trying to make connections between different math topics (exploring statistics, for example, in an algebra book). But the best students will make the connections for themselves and the less-gifted don't need that anyway.

Another advantage I see with the Holt book is that it can more easily be used by a student teaching his or herself. While Bellevue has many excellent teachers, some are not that great, and the Discovering series I think requires more creativity and energy on the part of the teacher for their students to learn the material well. If the ultimate goal is for Bellevue schools to raise the percentage of students passing the state's standards, then the Holt book is more likely to help the weaker students meet that standard without "dumbing it down".

Frankly, I have been frustrated for years with the math curriculum my kids have had, all at Bellevue schools. My high school senior (a good student generally) cannot independently solve relatively straight-forward problems, and she has little of the quick number sense that comes with many hours of practice solving math problems by hand, without calculators. Formulas and algorithms that work for large numbers of problems were discouraged from being learned, and instead students were told to "explain their work". Lots of time was wasted working in small groups, in which the lazy kids could copy from the kids who "got it". It is not necessary for kids to "investigate" math concepts -- the utility and use of a sin function, for example -- it is much more efficient to simply teach its purpose.

Yes, learning math can be tedious to some students, but being proficient in any skill requires hard work.

I don't want my kids to "discover" math; math has already been discovered for hundreds of years. I just want them to learn it!

Respectfully,

Mr. ...,

Thank you for your e-mail outlining your concerns. I see that you have also addressed the Math Adoption Committee about these issues. One of the reasons why we did not participate in the Math Parent Meeting sponsored by "Where's The Math Group" was because the Math Adoption Committee is still engaged in the process of reviewing all of the surveys as well as student achievement data from the pilot. We need to allow the committee to continue their process prior to making a recommendation to the Board. We have a great process in place that involves teachers, parents, and central office administrators. Your statement: "When 22 of the 26-committee members have already committed to the "Discovery" method, there are little the 4 parents committee member can do to have unbiased process..." concerns me because I truly believe that the members of the committee have made every effort to maintain an open mind in relation to both Holt and Discovering, have dedicated countless hours to the review of both sets of materials, and have not voted or provided a recommendation at this time. The next Committee meeting will be March 11 and the members of the Math Adoption Committee will continue their data review prior to making a recommendation to the Board. I encourage you to visit the website for the latest documents and information on this process.

Ladies and Gentlemen:

Understanding that there is a vast array of opinion regarding math curriculum, I have a few comments to add while you make this important decision.

I am not against what is known as "fuzzy" math: I have watched several public tv shows on the subject and I do think the "conceptual" stuff has it's place. However, I do feel that the district's current math curriculum and the Discovering series go too far and that there is not enough "computation".

My child has been a student in Bellevue since kindergarden, currently in 8th grade, entering 9th in the fall. She is in Hiag 2 this year as we did the leapfrog summer school math advancement class this past summer. She is a 4.0 student so I haven't paid a whole lot of attention until now to the curriculum adoption as it is my understanding that she will remain in Core Plus because of her current math level status. It is also my understanding that Core plus does not meet the new state math standards fully, thus the reason for new curriculum. This in itself concerns me. Is my kid (and are all kids) really going to be college ready as our district's lofty goals state we pursue? Especially if she is remaining in what is now a substandard curriculum compared to state standards. I wonder what recourse she and I will have for the failure of this system if she ends up needing remedial math in college. Will this end up in the courts? Who will pay for it?

I have had in the back of my mind for a while a niggling feeling that although she gets the math concepts that there is somewhat of a lack in actual application--the computation practice and skills which is why I feel you should select Holt over Discovering, or consider other curriculum that has a better balance of the two styles. I think this would also better satisfy many parents as well as fill in a gap in our kids current math education.

Overall, I equate the differing styles something like this (simplistically):

I want carpet in the basement so I need the area.

How will I figure how much carpet I need?

Play with a grid of inches or feet or yards to figure it out myself the long hard way?

As a teaching tool, not a bad idea to learn how to think it through.

But it has ALREADY been thought through and there is a formula for area: $L \times W$.

I think that for math concepts like this the formula should come first and then the "whys". Why do the work twice over and for multiple math concepts. It's redundant.

How do YOU want to calculate how much carpet you need?? To me it's a no brainer to use the formula that is already there.

Plus if our colleges feel that roughly half of our kids are not prepared for college math, then as parents, teachers, administrators and elected school board members it is our/your job to listen to that feedback and revise what we are doing, which to me would mean selecting Holt.

Furthermore, my daughter participated in both the Discovering and Holt pilots. It is my understanding that the pilots were somewhat piecemeal spliced together to fit into the current curriculum, which seems to me a half way attempt at an accurate study.

Additionally, I have major concerns over the parent survey and data you received. For neither pilot was I aware it was occurring, so I did not see the material, or have ANY way to evaluate what the lessons were or how my child actually did/felt. There was no notice home beforehand. I got a ridiculous, roughly 8 question survey that said things like "did your kid understand", "did your kid need help"--how would I know--compared to an ordinary math lesson. You should throw out all of that data because it is flawed and look at other parent feedback with especial care.

When a parent sees something this important mishandled in such a way it does not give rise to confidence and/or trust in the school district and it's processes. And this is only a small piece amid other communication and transparency issues.

I have also heard from several people/sources that due to budget cuts and the amount of controversy this math issue has generated that it might be a very smart decision to hold a year or so on an actual purchase and actually look at other curriculum materials to see if we can find something with more of a balanced approach. I think this would be a really smart move.

Thank you,

Hello:

I have been listening to the contrasting viewpoints regarding this Math Adoption as a concerned parent. Our son will be directly affected by this decision as he begins 8TH grade next school year.

I have an interest in Math and the curriculum in BSD from personal experiences. I have been involved with the evolution of the BSD Math Curriculum as an in-class parent volunteer, a member of a parent/faculty team that developed a math program for struggling elementary school students at Newport Heights and am currently a Vibes volunteer tutoring an 8TH grader in Math.

I found the parent driven meeting held this week to be as biased against Discovery as they claim the school district is biased for Discovery. As a result, I decided to attend last night's Committee meeting so I could learn about the results of the survey. I was pleased to see Chris Marks from the school board present for the majority of the meeting as well. Dr. Cudeiro graciously made some of survey data available to the audience which I found very beneficial. I plan to attend March 11 so I can understand the results of the unit tests as this is the bottom line.

My question is "Why didn't the school district choose to participate in that parent education meeting?" To paraphrase what one parent stated at that meeting "I am disturbed by this adversarial approach."

I appreciate the effort and time that is being applied by all of the members of the committee.

Dear Ms. Amalia Cudeiro and Board Members:

I would like to touch base with you regarding a very disturbing school matter regarding the math adoption selection process which the Bellevue School District (BSD) is currently under taking. This would not only impact the students of BSD, this would greatly impact the greater community in the Bellevue and greater Seattle area.

I want to first by saying that I think the BSD made an excellence choice in selecting you as the new superintendent for the district. I had a few opportunities to meet and speak to you on couple of school functions, such as the coffee with superintendent at Tye middle school, road show at Sammamish high. It is great to see that you are willing to reach out and seek inputs from parents and community members. You even mentioned to me that you intend to have them on an annual basis.

I attended the "Community Math Night" on February 24, 2010 at the Wilburton Instructional Service Center. I gathered the following information:

A BSD Math Adoption Committee is in the process of selecting the type of book to use for the math curriculum. The options are between the "Discovery" and "Holt" methods. It is a 26 members committee, and the committee is made up of 4 parents, 5 administrative staffs, and 17 teachers.

BSD has done some math pilot program in different school, where the students were placed in the "Discovery" and "Holt" method of teaching. BSD was invited to participate in the "Community Math Night", but decline to participate.

Numerous findings, test results, and testimony from university scholars presented which indicate the negative impact of the Discovery method. Indication that the selection process is not fully transparent and impartial, and it is bias toward the Discovery method.

Let me share the experience that my wife and I have with our children who are currently in the 4th and 11th grades. Our 11th grader had expressed frustration to us numerous times regarding her math class. She told us that the teacher does not teach them anything. They are to put in group to do their work. When you have students who do not fully understand the subject, the end result is copying the answer. I suppose this is the "discovery" part of the math, where some argue that it is good to have student actively participate to discover the solution on their own. This type of teaching creates a challenge for the parents like ourselves to help our kids at home with their math homework since we learned math the traditional method. We were unable to help our 11th grader since 9th grade due to this method of teaching. Our 11th grader is not exceptional math student by any mean, but she has been getting A's until 10th and 11th grades. We do wish our 4th grader encounters the same type of experience where she will be learning math by discovering with other classmate, and we cannot help her at home due to the method of teaching.

The BSD Mission Statement stated: "To provide every student with a top-of-the-line college preparatory education so that they can enter and succeed in the college or university of their choice." The "Discovery" method is not in-line with how the college or university ways of teaching, the result indicates that the student is not succeeding in college in math where student entered college has to take basic math (algebra level) in order to proceed onto the regular math class.

I do see that there's a link in the bottom of the BSD web site for the Math Adoption website. I don't feel that there adequate public involvement for this process. When 22 of the 26-committee members have already committed to the "Discovery" method, there are little the 4 parents committee member can do to have unbiased process. I strongly urge that BSD adopt the "Holt" method for the math curriculum.

Thank you.

Dear Bellevue School District-

I feel very strongly that you adopt the HOLT textbooks for Middle and High School.

I am a parent of a 5th grade boy who has learning disabilities. His disabilities are with language, reading and writing, yet he has been **behind in math**, and **did not pass the last WASL** math test, even though he actually understands Math number problems.

WHY?

Because of the horrible "language based" math curriculum our Elementary schools were using his K-1-2-3 years. Not only did he get behind in reading due to his disability, he was also behind in Math because of the language based curriculum. He did not learn to read until second grade, and even now reads at a 3rd grade level. **The language based math curriculum put HUGE challenges into a subject my child does not need to struggle in. He "gets" math.** Its hard enough for him, why make school harder?

My friend's daughter, now 20, also had the the Language based Math curriculum at Eastgate, Tillicum and Newport...and had to get tutoring to get her math up to speed for college.

Please, Please, do not deny our children this opportunity. Please contact me if you would like more details about my plea for the HOLT curriculum and my child's story.

I urge you to adopt the Holt program for BSD's middle and high school math curriculum.

As a parent of two BSD elementary students, I've seen the amazing difference a change in curriculum can make. The new elementary math curriculum far surpasses the previous one. No longer do I feel the need to supplement BSD's math program. My children now think school math is exciting, not frustrating and dull!

After investing several evenings exploring the pro's and con's of both the Discovering math program and the Holt math program, *it is clear to me that the Holt program is the far superior choice.* Holt math is most clearly aligned with Math Expressions, the new elementary curriculum. It's on-line resources for student use are clear, effective and technologically relevant. It's approach to teaching terminology and number theory is easy to grasp and well thought out.

In contrast, the Discovering math is shockingly reminiscent of the poor curriculum previously in place at the elementary level---convoluted, wordy, and frequently unclear.

I concur with the Office of the Superintendent of Public Instruction, **"The final recommendation is Holt Mathematics"**.

To Whom It May Concern

I, ... (parent to a 5th grader @ Somerset & a 7th grader @ Tye), would like to express my support for the Holt math program that is currently being considered for adoption. Holt is most aligned with state & national guidelines and is better suited to prepare students to be successful in college math courses.

Having experience Holt math for my oldest daughter for 1st-4th, we were very pleased with her math progress. She has steadily regressed since moving to Bellevue. We are now at the point of supplementing her 7th grade math with foundation and principles in math on our own. I would like to see us restore rigor and adequately prepare our students for college. While not all students will go into a math-related field, I believe it is our responsibility to not limit students' possibilities by not providing them with a solid mathematical foundation. The only way to gain mastery in math is to have worked out examples and to practice the steps multiple times. I strongly believe the high quality math teachers will be able to find a way to keep the students engaged and excited about math in spite of Holts' more traditional approach to math.

Let's do the best thing for our Bellevue kids! Let's help them avoid remedial math in college. Let's make them confident and successful in advanced math and keep all doors open for them.

To whom it may concern:

I am a Bellevue resident and a parent to two children currently enrolled in the Bellevue School District at the elementary level. My oldest daughter will be attending middle school next year. I have been monitoring with great concern the recent path your board has been taking with respect to the choice of future math text books.

Math is a language and my children will need to learn to use it at a world-class level of proficiency in order to compete with others later on in life. I believe math education at the elementary level should begin with a focus on foundation building, starting with definitions, key concepts, and mastery of arithmetic algorithms. Like any other language at the beginning level, memorization must be at the center of building the foundation. The elementary math curriculum's main goal should be for students to attain proficiency and accuracy. By the time a child leave elementary school he or she should have acquired a set of basic tools that would allow him or her to function as a member of our society, regardless of later educational attainment (to balance a check book, keep a budget, make informed life decisions that require using numbers.) I believe standard algorithm should continue to be taught and expanded at the middle and high school level. By the time a child gets out of high school he or she should have been exposed to algebra, geometry, trigonometry, statistic, and some analytical geometry if not pre-calculus (preparatory for university). In our professional lives my wife and I are required to apply our knowledge of math principals with efficiency and accuracy. I fully expect that same standard to be in place when our children enter the workforce. It is through this prism that we assess the rigor of our children's math educational training and resources.

When my daughter was in first grade, I discovered that the convoluted questions in her math assignments were killing her interest in learning and mastering even the most basic of arithmetic operations. I later learned at a school presentation on math curriculum that the school was teaching the Terk or discovery method in its math curriculum. At one school meeting, I conducted a straw poll of other parents regarding this topic. The majority I counted expressed similar frustration and indicated that they either pay for tutoring or supplement at home to compensate. Likewise, my wife and I have had to intervene with supplemental material and, with our tutoring, help our children maintain their interest and self confidence in math. That said, I do not want to take away any credit due to the many accomplished and dedicated BSD teachers that my children have been lucky to have had. They have also made a difference. But our teachers have to be given the right tools, guided by the right educational philosophy. First and foremost, they should be guided by a core philosophy of helping our students achieve math proficiency and accuracy.

I am not in favor of adoption of Discovery-based teaching methods in the BSD curriculum. I believe it is weak, inefficient, and it lowers the bar for math standards for my children. Discovery Math is lazy Math — it is based on the misguided idea that if children can learn fundamentals through self discovery they would “enjoy” it. This lets weaker math teachers off the hook and slower learners fall through the cracks in our educational system. To me, to be given only the choice of Discovery or Holt is a false choice. The real choice is about choosing the right math teaching philosophy. Then, choosing the best text book(s) that is the best reference source to support that philosophy and allow our great teachers the latitude to challenge our children to learn and apply math. That choice is to make sure traditional math algorithms is at the core of math curriculum taught in our schools. If Holt text book supports that choice then my vote is for Holt.

Please do not handicap our children with experimental math philosophies. Whether you call it Discovery or New Math, it is voodoo Math. Choosing this path in the BSD curriculum only makes our kids guinea pigs for a fad, hyped by a group of academics supported by business people just looking for new revenue streams. Our children may pay the price later on when they may find themselves unable to enter a university or even a vocational program unless they take remedial math classes to make up for what they did not master in their elementary, middle and high schools.

Sincerely

Dear Committee,

As a parent with three children in the BSD (1st, 6th and 9th grade), I have obvious interest in the upcoming BSD high school math curriculum adoption. My oldest son is a freshman at Newport High School. He has really thrived in his early high school experience. His HIAT-2 class recently piloted the Holt Geometry series. He told me that for the first time in his recent math classroom experience, he understood precisely the objectives of each lesson and felt that he could master the skills with confidence. He admitted that the math was much more rigorous but at the end it was a much more efficient and clear way of learning math compared to the discovery process that CORE-plus is currently taking him. He and many of his classmates were sad to see the Holt math end. (He has written the adoptions committee on his own previously.)

I was very disappointed that no one with direct experience with the Discovery Algebra nor anyone representing BSD was on hand at the Parents Forum last night. I worry that the same rhetoric's of "the math war" are again polarizing the parents and the district in this adoption process. This decision should not be made without clearly understanding the long term ramification for our children. Rather than making a unilateral decision, I believe that there may be more prudent solutions. Since BSD is a large school district, perhaps for a period of 2-3 years both curriculum can be offered. Students and parents would be allowed to choose. The state mandated EOC assessment for algebra could then be used to directly compare the mastery of students in algebra, for example. The preference by parents, students, and teachers would also be known over time.

I know such plan may be complicated to implement at first but should not be prohibitive given the resource of this school district. For example, we offer AP and IB programs for a small subset of students. Most math teachers I know can either adapt to the new curriculum or be aligned to teach the curriculum of their preference. If book purchase is an issue, some parents who feel strongly would gladly buy books for their kids thus

reducing the textbook expense during the trial period. Offering two different math tracks should not be difficult. I believe the results would become obvious soon into the trial period. The BSD experience could also serve as a model for others who must decide between different curricula, particularly so different in pedigree. Perhaps different groups of students do derive benefit differently from these curriculum. If that is in fact the case, would adopting one uniform math curriculum make sense?

Dear Board Members and others,

I write this e-mail in support of selecting the Holt textbook for use as the math text in the Bellevue School District. Though there seems to be some support in the District for Discovering, which uses an inquiry based process for learning, the text has been found to be deficient by the State Superintendent's Office of Public Instruction and should not be under consideration. Holt is the only text that meets all the criteria for instruction.

I urge you to select the Holt text for use in the District.

Thank you very much.

To Whom It May Concern

I, ..., would like to express my support for the Holt math program that is currently being considered for adoption. Holt is most aligned with state & national guidelines and is better suited to prepare students to be successful in college math courses.

I am concerned about the present math adoption procedures.

I wonder if you can direct me to charts and proper documentation that shows how Discovery material would eliminate or close the gap to the many real problems that now exist in the Bellevue school District regarding math programs.

Certainly the new Elementary Math program has shown some real progress to getting back on track for teaching math to our students.

After 35 years of teaching I certainly have seen all the possible methods used---- there really is nothing new.

Those of us who used things such as "cooperative learning groups" for delving into basic math concepts and algorithms know how poor this method is.

There is a place for group discussions regarding some extensions to math--- but certainly not as a basic text.

The needs of our underserved population shows huge gaps in their ability to do well in math using a discovery based math curriculum. These facts are available and need to be taken into consideration.

I assume the committee has looked into all the information from University of WA math people, guidelines for meeting standards, etc. and therefore will choose the Holt Math series for use in our district.

Thank you,

I have a 10th grader at Newport who was part of the Discovering math pilot. I would like to express my frustration and dissatisfaction with this program and implore you NOT to adopt this program.

My son started this unit with a B in the class and ended the semester with a D. This is a student who was taking approximately 11 hours of structured math per week. Of course he had the regular HIAT math class, he took the math support class and he attended 2 hours of Sylvan tutoring each week. In addition he had an A in participation which tells me the teacher felt he was making every effort he could.

We now look at the expense in sending him to summer school not only to improve his grade, but to make sure he has the math foundation needed for next year. This is in addition to the expense we incurred in sending him to Sylvan.

I want to ask how will the Bellevue School District take responsibility for these blunders???

I ask you what more he could have done???. This clearly points to an issue with the curriculum.

God Bless those parents in the Seattle School District who took this matter to the courts.

Thank you,

Dear BSD Math Adoption Committee,

In your evaluation of the two math curriculae presently being considered, my NHS freshman, taking sophomore level math, would like to share her input. First, she trialed Holt. She loved it. It was the first time in nine years that she has experienced organized, step by step, accurate, and specific instruction. It is the first time in nine years that with that instruction she has been given enough significant exercises and problems to solve that she could gain some mastery. As a parent, I can tell you that this is mastery that she has sorely lacked. Though she is ahead one year in math and is a straight A student, she is lacking in basic, everyday math skills. These are skills that every single NHS graduate will need in almost any job and certainly in their lives, skills involving percentages, fractions, decimals, ratios....that will allow them to work with P&L statements as even a low level manager must, evaluate investments as adults saving for college or retirement, understand a car or home loan they are considering. Even the top NHS math students do not have these skills.

The second point my daughter would like to share is that it has consistently been her experience throughout the investigative math years that in reality there is very little, if any, investigation going on in table groups. Her very frustrating experience has been that she does all the work, the other members of the table group grab her paper and copy her answers. She is forced to continue this because the group grade counts. Additionally, it is extremely frustrating for her because she is having to do all this math while very distracted by all the non-math talk going on all around her and the other table group members continually asking her what they should write down, or trying to pull her paper away. The investigative work is a great concept in theory, but in reality it is a disservice to the majority of students who not only do not participate in the process but could have been using that time to work on many problems, gaining mastery. It is also a disservice to my daughter who does poor work in groups because she is very distracted, now absolutely hates working in groups, feels frustrated and negative about math, a subject she likes, and also is never given the opportunity to gain mastery of a subject. I have spoken to fifteen other students that are a year ahead in math and 100% of them have the exact same experience and feelings. Please talk to these students about what is really happening on a daily basis in the classroom.

I was walking with a friend on Monday. She received a text during our walk from her freshman NHS student who is also ahead a year in math, asking to please be picked up early from school. This student had already consulted with some other freshman about math class that day and heard that nothing was going on, it was boring, and so wanted to just come home and skip math because this student had more productive things to do with that block of time. As I inquire about my daughters various classes each day when she comes home, I invariably get the same type of response from her. The third and last point my daughter would like to share is that she has found math slow and unchallenging at school. It seems to me that the BSD is failing the average and below average math students by not graduating them having mastered just the basic skills they will need, and has failed the top math students because they are bored, unchallenged, but also lacking those same skills.

We are a very fortunate family. We have the financial resources and time to provide math instruction outside of school. Both of my daughters study Singapore math at home. I pay for my older daughter to study this curriculum with a private tutor once a week. Though she is in 10th grade math at NHS, she is just starting 9th grade math in the Singapore curriculum. She has been doing this curriculum since second grade. My younger daughter started in kindergarten as I already, by that time, knew how deficient the BSD curriculum was. I have watched over the years at the continually widening gap between what my older daughter gets at BSD and what Singapore is covering. The gap became startling in 7th grade and has only increased, even though she is a year behind in this Singapore curriculum. She is, however, very challenged and engaged with the Singapore curriculum, something she has never once been with the BSD curriculum. What is she able to get out of this outside math study? Not too much. Going just once a week and having just a half hour to an hour a week of homework just doesn't cut it, yet I cannot stop. I feel morally obligated to do whatever I can to make up for what she is not getting at school. This is a child that has excellent math aptitude yet is totally unchallenged in math at school. As a parent, I care about all students and fellow parents. I am so heartsick for those that don't have the time, knowledge, or money to help their students in math. It truly pains me. I started a math club at Somerset Elementary to try to help more students than just my own. I coached Math Olympiad for two years to try to help others. I worked in the classrooms during math instruction to give extra help to students. As a note, my daughter's tutor, a single woman whose only job is that of a tutor, is fully booked with NHS students and has just remodeled her entire home.

I really don't like writing this email, but as a good parent, I have no choice but to do the right thing for not only my children, but all children. Listen to the students, the parents, the parents working in the math and science fields, the UW professors. They know. You have found parents to be more than passionate about this issue. The sustained magnitude of this passion reflects the magnitude of the error made years ago by BSD in choosing a math curriculum that has failed our children. Please begin the process of rectifying that decision by choosing Holt.

Respectfully and sincerely,

Hello adoption committee members,

I was not able to attend the math info session this evening but got some feedback from a neighbor who did attend. This comment... "It was very sad *and shocking* to hear many Newport High parents speak at the meeting to say their kids are failing at math and will not be able to consider careers that rely on an advanced level of math" was an all-too-familiar comment I've heard over the years from many parents in my neighborhood. In fact, I will never forget one mother breaking down in tears recalling her daughter's utter shock when she failed the math portion of the SAT so miserably, but of course was a A math student at Newport HS.

I have a 6th grader who will never believe he is good in math. He has been through TERC most of his elementary life, and never, ever got it. We supplemented, tutored, encouraged and worked with him, but the damage has been done. How? He loves science and says he'd like to become a scientist, but then says he probably won't because of math. It sounds absurd to us adults but this is what he believes about himself. I hope, for his sake, and for all those exasperated tax-paying parents in this district, including myself, that you will choose a math curriculum that will seriously prepare our children for the expectations of math skill and knowledge beyond the Bellevue school district. Please choose Holt. No more fuzzy math please.

Attachments:

January 25, 2010

Dear Committee Members,

I am the parent of a sixth grader who attends Tillicum Middle School. I am writing about the math adoption process currently under way in the district. According to the district's website, you are going to adopt either the Holt Algebra-Geometry series or the Discovering Algebra-Geometry series. To educate myself I have read some reports critiquing the two series. One report is by W. Stephen Wilson and the other by Guershon Harel. I also visited Newport High School Library to review the textbooks and filled out the surveys.

The report by Wilson is very critical of Discovering. He goes into considerable detail in his analysis of how the texts cover specific mathematical principles, but I will limit my references by pointing out a few of his comments. Wilson states that "Discovering minimizes the importance of the core of algebra in their texts", and "It is disconcerting to see pictures of graphing calculators on so many pages". He points to an example where a problem is explained: "Giving three calculator solutions equal status to algebraic techniques undermines the goal of teaching students algebra". On the geometry text he states "The text consists of 690 pages of inductive geometry followed by a short attempt to do rigorous deductive geometry. Unfortunately, the rigorous attempt depends on vague and "discovered" definitions scattered throughout the first 690 pages. This is a highly unsatisfactory geometry text." I could quote several other examples, but will jump to his final summary where he states that "Discovering is unacceptable in all three categories studied".

Harel is equally critical of the Discovering series in his report. On the Geometry text he states: "The text is about empirical observations of geometric facts; it has little or nothing to do with deductive geometry". Both authors speak more favorably about the Holt series. Wilson says "Holt is the only program acceptable in all three categories, but it cannot be recommended with enthusiasm". Reviewing Harel's chart in his summary, while he finds some fault with Holt, he views it as the best of those he reviewed. I could quote more, but I assume that you have already read these reports and know in detail what they say. It is my understanding that Wilson and Harel are the mathematicians chosen by Strategic Teaching to review the texts for the State Board of Education.

My research also revealed that Superintendent Randy Dorn recommends Holt and does not recommend Discovering. The parents and students of BSD deserve an explanation as to why you are considering a curriculum that nationally recognized mathematicians reviewed and found to be so mathematically unacceptable that the State Superintendent will not recommend it. Based on these reports, I strongly urge you to take the advice of those who understand mathematics and choose Holt as your curriculum for secondary math. I must add, though, I am disappointed that BSD did not include Prentice-Hall in their

selection process. From what I have read about the Prentice- Hall math texts I would have preferred these texts over Holt. I've attached a letter by UW Math Professor, John M. Lee, written to Seattle School District math adoption committee chair Anna-Maria de la Fuente. His detailed review speaks very highly of Prentice-Hall and points out major weaknesses in Discovering. The ideal situation would be for you to restart the adoption process and decide between Prentice-Hall and Holt. BSD has a national reputation to protect. Choosing Discovering will diminish BSD's standing in the wider community.

Bellevue has produced many students who are strong in math. On the surface one might conclude that it is due to the math programs of BSD. But you don't have to scratch the surface very hard to reveal the real reason. Bellevue has a large number of highly educated parents who recognize a strong program from a weak one. Many of those parents have strong math backgrounds and understand that for their children to be competent to pursue math or science as a career, they must provide more than what the district is teaching. How do they accomplish this? By supplementing their child's math education. I am constantly astonished at the number of BSD parents who supplement at home, hire private tutors, or send their children to after school math courses. The explanation is always the same. They view the BSD math curriculum as inadequate.

When TERC Investigations was the elementary program, supplementation was beginning in first grade. I can understand the need to supplement or tutor when a student is struggling to understand the material, but it seems very odd that a school district would use a program that causes large numbers of parents to supplement their child's elementary math education. Remember, we're talking about supplementing basic arithmetic starting in first grade, not advanced math. Supplementation invariably leads to two classes of math students; ones whose parents have the financial resources to pay for supplementation materials or additional math instruction, and those who can't. This inequity is unacceptable in my opinion.

I know that the math adoption evenings have been poorly attended, and that there have been only a few surveys filled out. One might conclude that this is because parents are satisfied with the math programs. I would explain it differently. The attitude of many parents is that it is easier to fix the problem at home rather than change BSD. Interest in the adoption evenings was further diminished by the fact that the evenings were not being held to discuss the merits of the two curriculums. Many parents are still waiting for a meeting where we can have a frank discussion and where our comments can be heard and discussed. Parents have plenty of history to know that BSD does not take our comments seriously. Previous complaints about TERC and CMP2 were brushed aside and ignored. So, do your duty as committee members this time and give us a forum to express our concerns and opinions.

To summarize, Discovering should be rejected and Holt adopted, or re-start the adoption process with Holt and Prentice-Hall as the two choices. Hold a meeting for parents to have an open forum where their comments and opinions are heard. It is better to delay the decision by a few months than to make a poor decision. Like many middle school parents we are now supplementing CMP2. It is our hope that once our son reaches high school we will no longer need to supplement. If the correct math curriculum is chosen, perhaps we will get our wish.

Thank you,

Dear Anna-Maria,

I had a chance to look over some of the high-school math textbooks that are being considered for adoption, and I would like to pass along some of my thoughts and impressions to you, to the adoption committee, and to the School Board.

First, let me say a few words about my background. In addition to being a parent of two Seattle Public School students (one current and one former), I'm a professor of mathematics at UW, with 26 years experience doing mathematical research and teaching at the college and graduate levels. For the past 2½ years, I've been teaching the *Geometry for Teachers* course offered by our department, which introduces undergraduate and Master's students who are hoping to become high-school math teachers to the rigorous mathematical theory underlying geometry. I also have a bit of experience teaching at the middle- and high-school levels: Before going to grad school, I taught math, physics, and computer science to 7th-12th graders for two years at Wooster School (an independent school in Connecticut); and in 2003-2004, I created and taught an after-school math enrichment class (algebra and geometry) for 8th graders at TOPS school in Seattle—a class that was so popular that it has become self-sustaining, and typically enrolls 35%-40% of TOPS 8th graders each year.

Because the adoption committee's process has been pretty thorough about ensuring that the content of all of the candidate textbooks aligns well with the state standards, I didn't worry much about precisely what is covered in the different books; instead, I focused my attention primarily on how effectively the material is developed and presented. I was looking particularly for two indicators of quality: (#1) how well the book introduces new concepts by tying them in with ideas students already know, describing examples that illustrate both concepts and techniques, suggesting appropriate inquiry and discovery activities, and providing teacher support for explanations and in-class activities; and (#2) how well the book, after completing the inquiry/discovery portion of a lesson, gives clear and unambiguous statements of the mathematical conclusions that students need to draw from the lesson, especially definitions, postulates, theorems, and proofs in geometry, and computational algorithms, problem-solving techniques, and formulas in algebra.

That last point might deserve a bit of expansion, so please forgive me for getting on my soapbox for a moment. Mathematics is unique among fields of human endeavor in the level of certainty with which we can believe its conclusions. We know the ratio of the circumference of a circle to its diameter to be

exactly π , and we can calculate it to far greater accuracy than we will ever be able to measure. No other field of scientific or humanistic study is ever able to claim this degree of certainty, but the certainties of mathematics provide critical underpinnings for the construction of models in virtually every natural and social science. (Of course, no human understanding is 100% certain, because there might be subtle mistakes somewhere in our logic that we haven't caught yet; but relative to other fields of understanding, mathematical knowledge is vastly more certain.)

The reason we are able to be so certain is that mathematics is a *deductive discipline*. Although our discovery and intuitive understanding of most mathematical truths are based on inductive and empirical reasoning from real-world experience, ultimately the certainty of our *knowledge* of mathematics is founded on logical deduction. The dazzling array of products of mathematical deduction constitutes one of the crowning achievements of the human mind. Therefore, a course that does not imbue students with the spirit, techniques, and practice of deductive reasoning is not a mathematics course worthy of the name. In geometry courses, this means a substantial introduction to definitions, postulates, theorems, and proofs. In algebra, it means taking patterns discerned from looking at examples, and translating them into computational rules, algorithms, and problem-solving techniques that can be applied efficiently and in great generality.

OK, now I'll climb down off my soapbox and tell you what I thought of the individual texts.

Geometry Texts

Because of my recent experience teaching *Geometry for Teachers*, I spent most of my time studying the three geometry texts. As far as I could tell, they all seemed to meet my criterion #1 (introducing new concepts) admirably, presenting an exciting array of inquiry activities for students and their teachers to use in gaining insight into geometric truths. So I'll focus my comments mostly on my impressions of how they met criterion #2 (clear statements of mathematical conclusions). This criterion is perhaps more important for geometry texts than anywhere else in the curriculum, because high-school geometry is the *only* place where most people are ever introduced to serious deductive reasoning.

Prentice-Hall: Geometry

I think this is a very good geometry text. It's remarkable for managing to achieve a fine balance of inductive and deductive reasoning, hands-on activities and clear explanations. It starts with a nice informal introduction to the "tools of geometry," which introduces such things as compass-and-straightedge constructions, ruler and protractor measurements, paper folding, applications of geometry to the real world, and the beginnings of deductive reasoning in the form of some basic postulates for geometry. This is an excellent way to get students engaged, and it should make it clear to them from the beginning that geometry is something that can easily be related to their everyday experience.

After this introduction, right away in Chapter 2 the book begins to delve deeply into deductive reasoning. Students are offered a thorough grounding in the laws of logic and the ideas of postulates and theorems, with examples of how deductive reasoning works in both algebra and geometry. Most importantly, there are clear examples of well-written proofs in various formats (two-column, paragraph-style, and flowchart), which students can learn from and emulate.

After that, the development proceeds in a well-organized and logical fashion. New concepts are introduced first through activities and examples that make the ideas come alive; then the students are encouraged to conjecture general conclusions from their inquiry experiences; and finally, the general principles are clearly stated as theorems, and *they are proved*, either by presenting a complete proof in the book, or by guiding students to create a proof on their own with appropriate suggestions and hints where needed. The descriptions and proofs are concise and easy to read, without being telegraphic.

The presentation is graphically extremely effective. All new mathematical terms are both boldfaced and highlighted in yellow when they are first defined. All mathematical statements are displayed in color-

coded boxes, showing clearly which statements are definitions, which are postulates, and which are theorems. At the end of the book, there is a table of all the postulates and theorems, with page references to where they are introduced and proved, and an amazingly comprehensive glossary of mathematical terms (in both English and Spanish!), again with page references. The choices of terminology, mathematical definitions, theorem statements, and proofs are mathematically sound throughout the book.

One thing that impressed me about the book was, paradoxically, the things the authors chose *not* to prove. Starting in Chapter 9 (Transformations), most theorems are presented without proofs. The textbook itself doesn't say why, but the explanation is given in the teacher's manual: "the proofs [of the theorems in this chapter] are too complicated for students

at this point.” Knowing what’s involved in proving all of those theorems, I think this is a sound judgment. And even where proofs are eschewed, each new mathematical fact is presented as a clearly stated theorem, so that students (who by this time should be well acquainted with how proof leads to certain knowledge) will understand clearly that these results are on the same logical footing as all the previous theorems in the book, and not just empirical conclusions from experience.

Key Curriculum Press: Discovering Geometry

There is a lot to like about this book. I was impressed with a number of things about the presentation: the incorporation of art, both to decorate the text and to motivate geometric ideas; the use of color, typography, and boxes to indicate the functions of different parts of the text; the cartoons. The inquiry activities seem appropriate and engaging; the explanations of mathematical definitions and conclusions are sound; and the exercises give students an excellent array of opportunities to develop skill in thinking about all aspects of the subject.

However, this book had one serious drawback that makes it, in my opinion, vastly inferior to the Prentice-Hall text. For some reason, the authors have chosen to put off a serious treatment of proofs until Chapter 13, the very last chapter of the book. To their credit, they figured out an intellectually honest way to do this: Every mathematical statement in the book prior to Chapter 13 is stated as a *Conjecture*, so students will not be misled into thinking that the general principles they have arrived at by inductive reasoning from examples have the same logical status as theorems. There are some examples of proofs of these conjectures in the earlier chapters, but since a detailed axiomatic foundation has not yet been presented, the authors are careful to say that all these proofs show is that *if* conjectures X and Y are true, *then* we can be sure that conjecture Z is true.

Despite its intellectual honesty, I foresee some dire problems with this approach. Most alarmingly, it invites teachers who are pressed for time, or who perhaps are somewhat uncomfortable with mathematical proofs themselves, to stop after Chapter 12 and never get to a serious consideration of real deductive reasoning in geometry. In addition, whether students ever see Chapter 13 or not, the fact that *every* mathematical fact in the first 12 chapters is presented as a conjecture is likely to foster some very dangerous impressions: that mathematical truths are nothing but a bunch of conjectured generalities based on empirical experience, and that proofs are an afterthought that one might or might not choose to pursue once one has arrived at a convincing conjecture.

For these reasons, I would strongly discourage the District from choosing this book. It represents a highly risky and experimental approach to teaching geometry, and I think the experiment, while well-intentioned, is unlikely to have the desired effect.

Algebra Texts

I spent far less time with the algebra texts, so I won’t have as much to say about them. Mainly, my overall impressions of the three algebra texts are parallel to my impressions of the geometry texts by the same publishers.

Sincerely,

UW Mathematics Professor

Dear BSD Math Adoption Committee, Dr. Cudeiro, BSD School Board,

The BSD curriculum staff’s analysis of the BSD Pilot test data does not control for the dramatic differences between BSD schools.

Attached is an analysis that does control for the differences between schools. You will see a robust finding in favor of Holt. You can see the key chart at the following URL

<http://public.tableausoftware.com/views/Pilot/BothByUnit?:embed=yes&:toolbar=yes>

The bars show the differences between course unit tests where both curricula were piloted by the same school. The long red bars indicate tests where Holt did much better than Discovering.

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To whom it may concern,

A robust finding in favor of Holt can be seen in the test data for the Bellevue School District pilot of Holt and Discovering [<http://www.bsd405.org/portals/0/curriculum/mathadoption/Data/MathPilotAssessmentData.pdf>] when you focus on the data for schools that piloted both Holt and Discovering for the same course unit. This focus is not done to give Holt an advantage. Rather, it controls for an independent variable: BSD schools have dramatic differences in the math ability of their average student (see chart 3).

As an example, consider Robinswood Middle School and Tyee Middle School [Robinswood grade 8 WASL 2009 pass rate: 29.2%, Tyee grade 8 WASL 2009 pass rate: 78.4%]. The fact that the assessment results for Holt IMT3 were 45% and 58% at Robinswood, compared to Discovering IMT3 results of 89% and 88% at Tyee, is almost certainly due more to the differences in the schools than the differences in the curricula. Unfortunately, the BSD curriculum staff did not report the assessment results from the Spring 2009 pilot of Holt IMT3 at Tyee and Odle, and Discovering IMT3 at Robinswood, Chinook, Tillicum and Highland. (Furthermore, the Fall 2009 data from Tillicum and Highland, which were reported as piloting Holt, is also missing.) If they had, we could control for average school ability as an independent variable by focusing on the IMT3 test results within each middle school. With the current reported data, none of the IMT3 results can validly be considered, and many other datapoints. [Note that another very useful piece of data would be the results of these same assessments as taken by students in our current math courses, namely CMP2 and Core Plus. This would allow further valid comparisons within schools.]

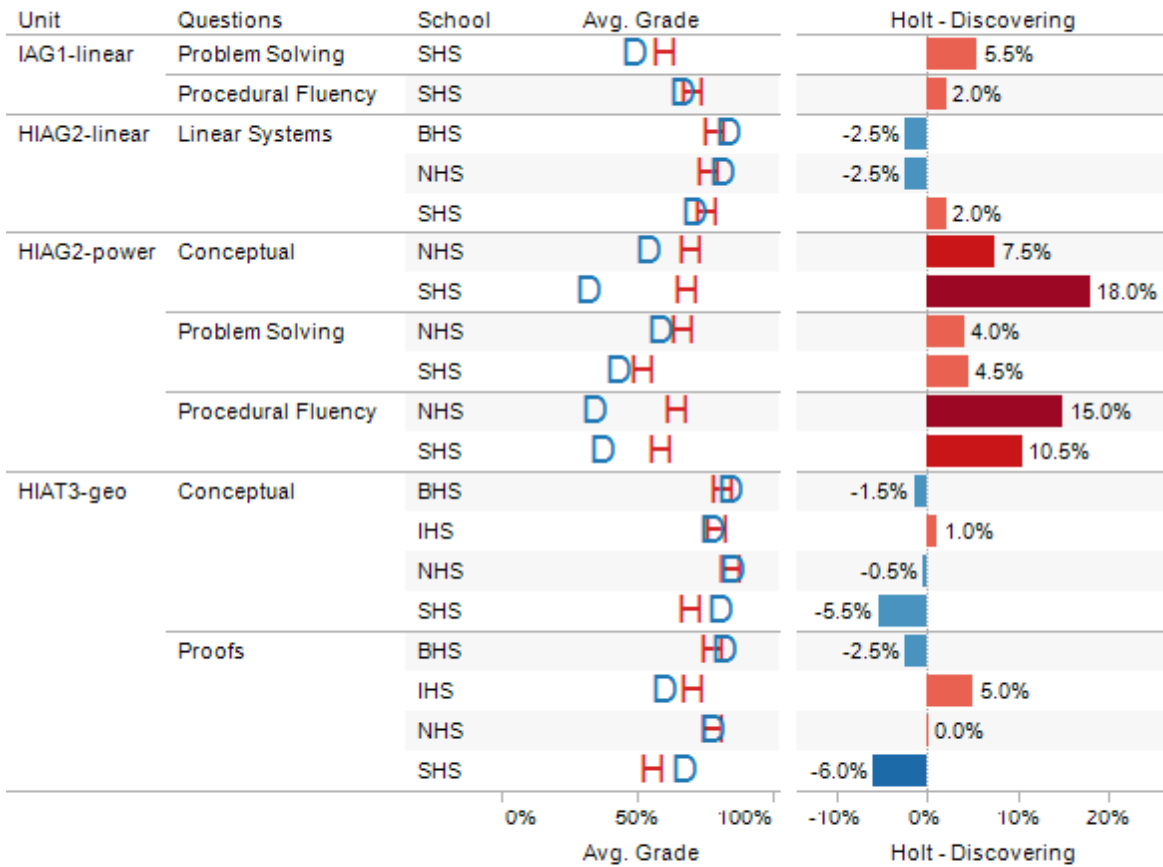
You can see the robust finding in favor of Holt in charts 1 & 2 below and at the following links, which show two views of the school courses that piloted both, one organized by school and the other organized by course unit. In both views, the average grade for Holt and Discovering is plotted in the left pane and the difference between those grades is plotted in the right pane as bars. This difference controls for another independent variable: the difficulty of the test. A given test is equally difficult for both Holt and Discovering, which means that the differences in average grade removes the test difficulty from the bars, allowing them to be compared across the tests (and schools).

<http://public.tableausoftware.com/views/Pilot/PilotedBoth?:embed=yes&:toolbar=yes>
<http://public.tableausoftware.com/views/Pilot/PilotedClass?:embed=yes&:toolbar=yes>

In both views, we see many long bars (i.e., large differences) in favor of Holt. Long bars are a robust finding because any error adjustment for these average grades would not change the finding in favor of Holt. When we look at the “by unit” view, we see that the long bars are for the course unit HIAG2-power models (quadratic equations) across multiple schools. Most of the other piloted units have short bars (i.e., small differences), which means that Holt and Discovering are roughly equal. The only data favoring Discovering with any robustness is at SHS in HIAT3-geometric reasoning where there are medium length blue bars (i.e., modest differences). However, if you look at the “by unit” view, you will see that the other pilots for SHS favor Holt, which may explain why teachers at SHS favor Holt. The SHS Geometry data is clearly not enough to overturn the robust finding in favor of Holt in the Algebra pilots.

Chart 1

BSD Pilot: Average Test Results "Piloted both - By Unit"



Curriculum

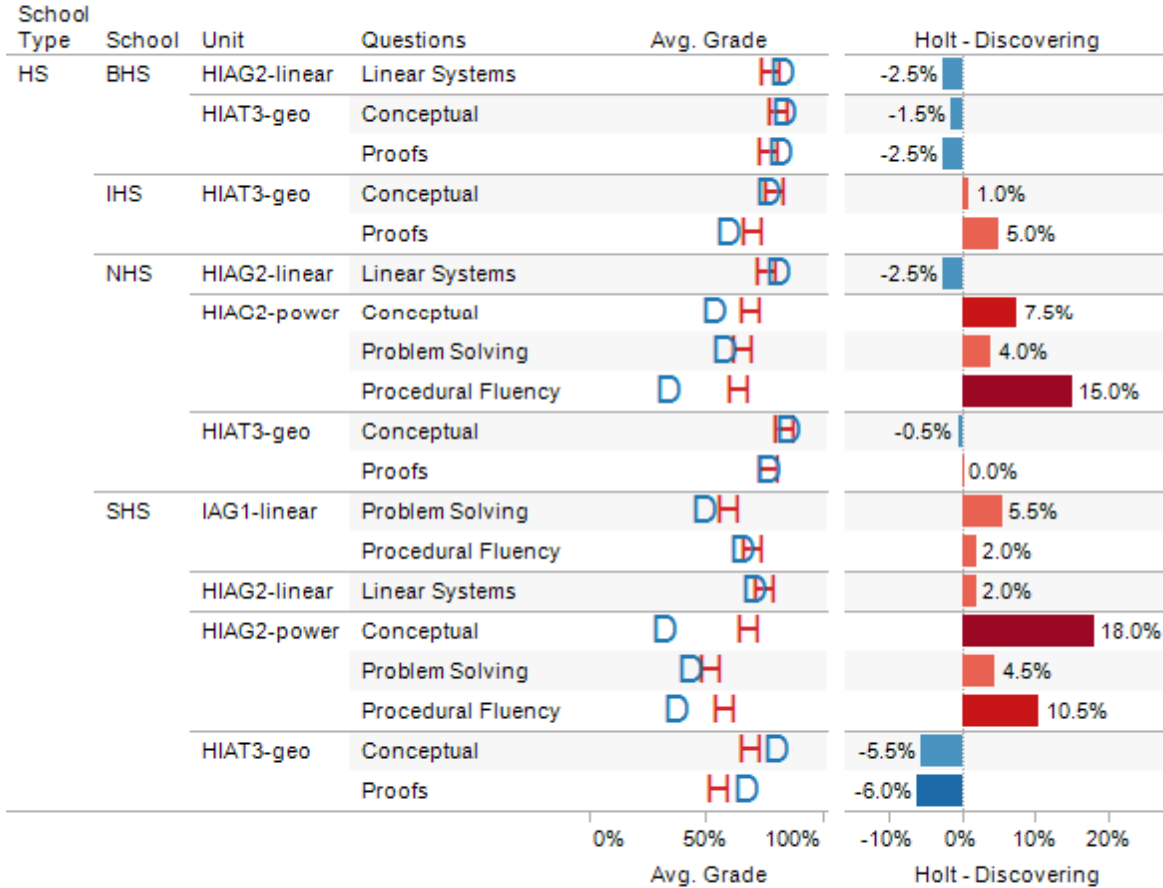
Discovering Holt

Average Grade Difference

-6% 18%

Chart 2

BSD Pilot: Average Test Results
 "Piloted both - Holt looks better"



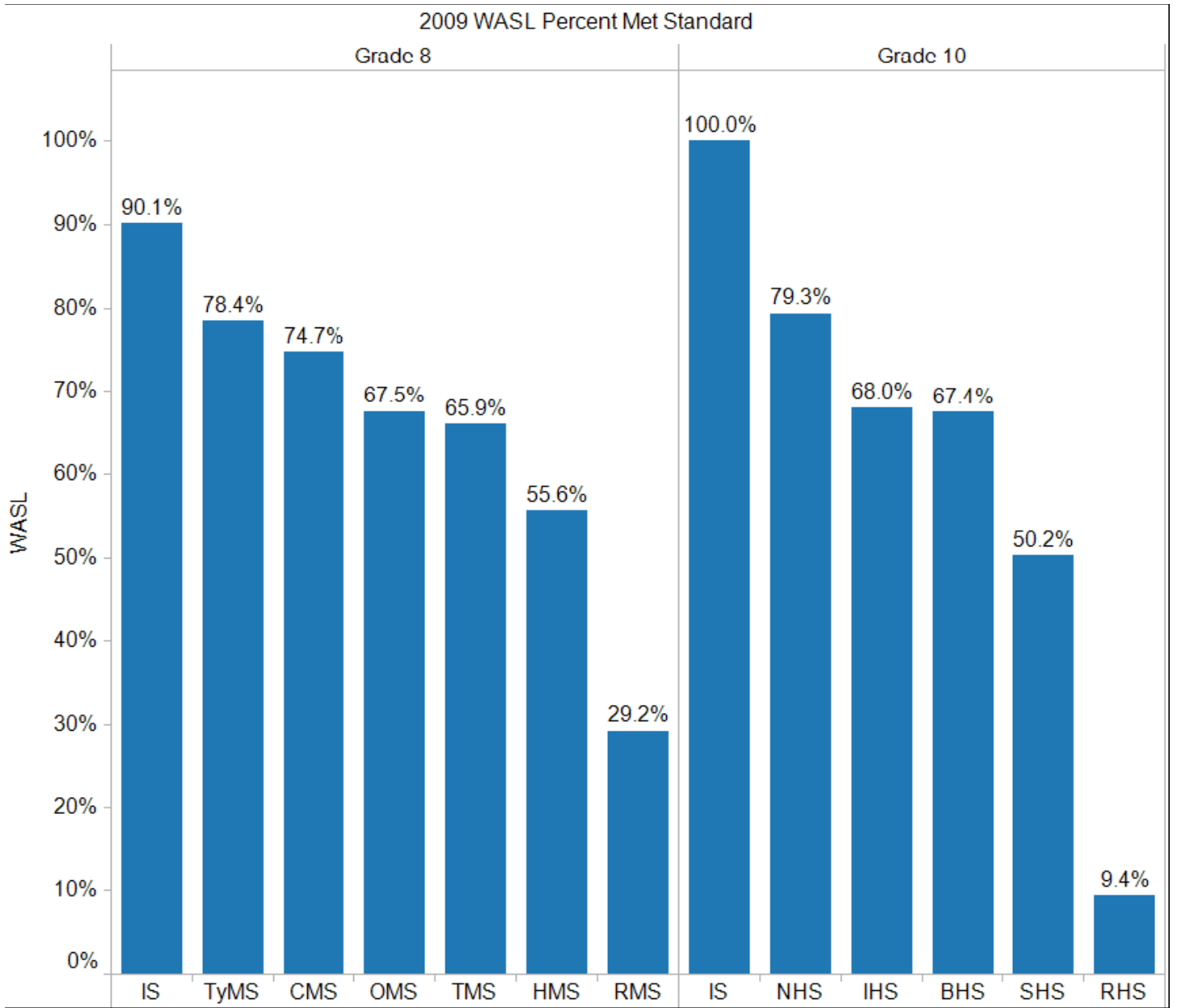
Curriculum

Discovering Holt

Average Grade Difference

-6% 18%

Chart 3



An absolutely astounding characteristic

of most Puget Sound School districts is:

their seemingly universal failure to look at relevant data in this area and State, when making decisions.

Seattle searched the nation to find slightly positive “DM” data in Madison Wisconsin, while ignoring the Bethel School District. Bethel began using Discovering 3.5 years ago. Bethel has 18,000 students.

Below you will see the change in WASL Math performance that occurred with the KCP “Discovering” Math Series adoption.

Note: the last column is the difference of the Bethel Subgroup when the State subgroup score is subtracted from it.

Bethel

White Students

10th Grade Math WASL

Year District State Difference

1998-99	23.50%	38.10%	-14.60%
1999-00	30.00%	40.10%	-10.10%
2000-01	27.80%	43.70%	-15.90%
2001-02	23.70%	41.90%	-18.20%
2002-03	29.50%	44.00%	-14.50%
2003-04	33.70%	49.20%	-15.50%
2004-05	43.10%	52.40%	-9.30%
2005-06	41.70%	56.50%	-14.80%
2006-07	38.40%	56.30%	-17.90%
2007-08	37.90%	55.70%	-17.80%
2008-09	33.70%	51.40%	-17.70%

Bethel

Black Students

10th Grade Math WASL

Year District State Difference

1998-99	10.10%	9.50%	0.60%
1999-00	13.40%	11.70%	1.70%
2000-01	10.20%	11.90%	-1.70%
2001-02	13.50%	13.00%	0.50%
2002-03	17.80%	14.20%	3.60%
2003-04	19.70%	16.10%	3.60%

2004-05 21.40% 20.40% **1.00%**
2005-06 23.30% 23.20% 0.10%

2006-07 26.60% 22.50% 4.10%
2007-08 22.50% 22.20% 0.30%
2008-09 17.60% 20.90% **-3.30%**

Bethel

American Indian Students

10th Grade Math WASL

Year District State Difference

1998-99 27.30% 14.30% 13.00%
1999-00 9.80% 17.30% -7.50%
2000-01 20.00% 19.70% 0.30%
2001-02 10.70% 21.30% -10.60%
2002-03 25.00% 21.90% 3.10%
2003-04 30.40% 23.40% 7.00%
2004-05 39.00% 26.90% **12.10%**
2005-06 38.80% 30.10% 8.70%

2006-07 45.50% 31.30% 14.20%
2007-08 38.20% 29.40% 8.80%
2008-09 25.90% 25.30% **0.60%**

Bethel

Asian / Pac. Isl.

10th Grade Math WASL

Year District State Difference

1998-99 18.90% 37.30% -18.40%
1999-00 33.60% 42.10% -8.50%
2000-01 33.30% 47.60% -14.30%
2001-02 35.90% 44.90% -9.00%
2002-03 43.10% 46.80% -3.70%
2003-04 36.30% 52.00% -15.70%
2004-05 42.00% 56.90% **-14.90%**
2005-06 41.80% 59.70% -17.90%
2006-07 37.30% 59.90% -22.60%
2007-08 40.40% 61.30% -20.90%
2008-09 36.20% 57.20% **-21.00%**

Bethel

Hispanic Students

10th Grade Math WASL

Year District State Difference

1998-99	23.60%	11.60%	12.00%
1999-00	13.30%	12.60%	0.70%
2000-01	29.60%	14.60%	15.00%
2001-02	22.20%	14.30%	7.90%
2002-03	13.10%	16.20%	-3.10%
2003-04	22.50%	19.70%	2.80%
2004-05	36.20%	23.90%	12.30%
2005-06	33.30%	25.40%	7.90%
2006-07	29.30%	25.60%	3.70%
2007-08	25.00%	26.10%	-1.10%
2008-09	17.50%	23.50%	-6.00%

Bethel

Low Income Students

10th Grade Math WASL

Year District State Difference

2003-04	25.40%	24.60%	0.80%
2004-05	30.10%	28.10%	2.00%
2005-06	30.20%	30.40%	-0.20%

2006-07	28.90%	30.50%	-1.60%
2007-08	25.10%	29.70%	-4.60%
2008-09	18.70%	27.30%	-8.60%

Note the CHANGE in performance from Spring 2005 to 2009 for each subgroup:

$-8.4 = \text{WHITE } (-17.7 - (-9.3))$

$-4.3 = \text{BLACK } (-3.3 - 1.0)$

$-11.5 = \text{American Indian } (0.60 - 12.1)$

$-6.1 = \text{Asian / Pacific Islander } (-21.0 - (-14.9))$

$-18.3 = \text{Hispanic Students } (-6.0 - 12.3)$

$-10.6 = \text{Low Income Students } (-8.6 - 2.0)$

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Great Adoption Bethel

These books serve everyone poorly and they are "Mathematically Unsound"

Many school districts continually fail to look at "the Evidence". It takes a Superior Court Judge to look at the evidence and say:

"The court finds, based upon a review of the entire administrative record, that there is insufficient evidence for any "reasonable Board member" to approve the selection of the Discovering series."

{Note the absence of reasonable people in Issaquah SD thus far.}

What can be said about the members of Adoption Committees and Instructional Material Committees that produce these recommendations?

What about Dr. Rassmussen in Issaquah, who on Feb 25, released a four-page letter explaining why he was recommending the "Discovering Math Series" to the school board for adoption.

(Whatever was Dr. Rassmussen thinking ???)

Read all about it here: "defending the indefensible"

<http://mathunderground.blogspot.com/2010/02/to-defend-indefensible.html>

Sincerely,

Dear MMAC,

As a parent who watched her child suffer though TERC Investigations, and then watched him blossom with Math Expressions, I am writing to BEG you to choose Holt over Discovering. Holt is nowhere near the "drill and kill" texts of my youth: it is clear, precise, correct and thorough. When I reviewed both sets of texts, I found myself perplexed as to why Discovering is even an option: it is muddy and confusing.

Do not turn back time for our children. We cannot afford to undo all of the progress they have made since leaving TERC. I cannot afford the tutoring expense if you choose Discovering.

Holt, Holt, Holt.

Sincerely,

Tyee and Somerset Parent

Email correspondence between Math Facilitator and parent. Start reading at the bottom.

We will get all the rest of the mail bag up by the end of today.

In answer to your questions:

1. We are not holding up anything as an opposing position. We simply listed both of the studies and the adoption committee is taking into account the information from each report. You make some good points in your letter about these reports. I will make sure that this email string is also included in our mail bag this week.

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2. We are not trying to make a claim that one pedagogical approach is better than another. In fact, our whole focus has been on having a balanced approach. So, no, I do not know of a study that demonstrates one approach used exclusively is better than the other.

Please let me know if you have further questions. You can reach me at 425-456-4112.

Thank you,

Sent: Tuesday, March 09, 2010 9:06 AM

Subject: RE: Resending math letter

Thank you for posting the parent comments. However, I do not see my previous letter on the site. Could you see that it is added? Yes, I would like you to include my latest email with the rest of the mail bag and give it to the committee. Please use this revised one where I have highlighted in **RED** two questions. I would also like you to respond to my questions.

Thank you,

Sent: Monday, March 08, 2010 12:52 PM

Subject: RE: Resending math letter

Thank you for your detailed and thorough email. I appreciate your strong interest and willingness to spend the time researching this topic. We do have the comments from all the parent emails up on our website. We put them up last week (we removed all the names). It is in the archives section and is labeled "mail bag." Please let me know if you have further comments or questions. Also, would you like me to include this email with the rest of the mail bag for the committee?

Sent: Monday, March 08, 2010 11:40 AM

Subject: FW: Resending math letter

This started out as a very short message, but somehow it just got longer and longer. I hope you take time to read it.

Before responding to the information found in the link you sent me, I'd like to make a request.

I read the comments by the middle school and high school math teachers. Would you also post all comments submitted by parents. You have my permission to post my letter. If you need the other parents permission a quick email to them will take care of it. I'm sure most of them will give their permission and we would all be interested in the other comments.

As I mentioned in my last email, I have read the third report by King and Bright and the notes recommending that additional work be done to reconcile the two different reviews. I do not give that report as much weight as the other two for a few reasons. First, there are questions of objectivity due to George Bright being a former employee at OSPI and James King being an author for Key Curriculum Press. I find no such conflict of interests with Wilson and Harel.

Next, it is interesting to note that the King/Bright report does not review the Discovering Geometry text. **Why is the King/Bright report held up as an opposing position to Wilson and Harel, when one of the three text books was not reviewed by them?** King/Bright give Holt high marks for both Algebra and Geometry. It seems the only aspect of their

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report that is different, when comparing Discovering and Holt, is that King/Bright give high marks to Discovering Algebra texts. However, that is offset by Professor Lee's self evaluation calling Discovering unacceptable. When putting all this together, the results are obvious. Holt comes out on top.

My own read of the three reports is that Wilson and Harel did a much more thorough job of their analysis. They both spend considerable time breaking down examples in the texts. King/Bright are less specific in their examples, yet in the end they still conclude Holt to be a fine Algebra series and Geometry series.

Inquiry based curriculum has been used for around a decade in BSD. They are held up as providing better conceptual understanding over students who are taught a more computation based curriculum. If students who were only schooled in programs similar to TERC Investigations, CMP2, and Core Plus turned out with better conceptual understanding one could make an argument that these programs provide a better math education. My discussions with parents, and comments made by science professors in Universities, do not support this. Not only are they weak conceptually, but due to the lack of computational education they are extremely poor in their computation skills. Now, they are weak in both areas. There are endless stories of high school students who don't know their multiplication tables and barely understand fractions. There are middle school students who don't understand the relationship between decimals and fractions, such as $\frac{1}{4}$ is the same as 0.25. University professors talk of students who can't convert numbers to scientific notation or perform very simple computations. Are these programs all to blame? I can't say for certain, but obviously something is terribly wrong.

My son attended Eastgate Elementary starting at the pre-school located there and then from Kindergarten through second grade. We placed him at a private school for third through fifth grade where he was taught a strong computational math program. BSD no longer uses ITBS exams, but his school used them in third and fifth grade where he scored 99% in third and 98% in fifth. I understand this is a relative score comparing him to all who took the test, as opposed to an absolute score. But, I think it shows he is strong in computations. His private school also gave the WASL in fourth where he exceeded the requirements in math. If the WASL is a more conceptual test, then he seems to have both under his belt. We always intended to place him back into BSD beginning in middle school, and that occurred last fall. Hence, my renewed interest in the math issue.

I hear lots of comments that Inquiry based programs engage the students better. Many of the teachers like the fact the students work together on problems. All of that is fine and good, but if in the end they turn out weak in math then it seems to me that we have let them down. There are articles touting the attributes of inquiry based programs stating that studies show this is a better way for students to learn. **Can you point me to a study which shows that students who were only schooled in these programs are stronger overall in math than those who were not schooled this way?** There is so much supplementation and tutoring going on by parents, including in BSD, that I don't know how you can prove that inquiry only based education is effective. But, I am open to additional information. However, I would like facts, not theories by educators, which is all I can find so far.

Thank you for your time.

Sent: Tuesday, March 02, 2010 1:35 PM

Subject: FW: Resending math letter

<http://www.bsd405.org/portals/0/curriculum/mathadoption/faq.htm#How is Bellevue School District using th>

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Thank you for your email and the research you have done on this subject. I have attached the section of our math adoption website that addresses the statement you raise in your email. I would be more than happy to discuss it with you further. Please feel free to call me at 425-456-4109.

Sent: Monday, March 01, 2010 9:41 PM

To: - MathAdoption

Subject: Resending math letter

Committee members,

It has been over a month since my letter was first sent to you. To date, there has been no response to my letter. I have spent considerable time educating myself on the subject and would appreciate it if someone would respond to the points I raise. In particular, this sentence:

The parents and students of BSD deserve an explanation as to why you are considering a curriculum that nationally recognized mathematicians reviewed and found to be so mathematically unacceptable that the State Superintendent will not recommend it.

I hope my time has not been wasted.