

Math Adoption Committee
February 25, 2010
ESC Room 200, 4-7 pm

Sharon started the meeting by giving instructions to the observers in the room. All committee members were present.

Sharon then briefed the entire group with the agenda items, district mission, the purpose of the committee's work, reminders from the first meeting of the Committee:

- We are adopting instructional materials, which does not mean that it becomes the curriculum. Curriculum includes our selected uses of the instructional materials, including supplemental resources.
- While the textbook is important, the most important factor for promoting student achievement is the quality of instruction that students get.

Amalia Cudeiro, Superintendent, spoke to the committee, thanking them for the time and effort they've invested in the process and the importance of the work.

Ricardo Cruz, Assistant Superintendent for Human Resources, Employee Relations/General Counsel, was introduced and took questions from the committee regarding the recent court case involving the Seattle Public Schools. The court ruling requires that the SPS Board of Directors review their decision to adopt the Discovering Math series. Committee members asked questions regarding the case and possible impact on Bellevue's math adoption. Mr. Cruz thanked the committee and left at 4:25.

David Orbitz, representing the Parent Information Night sponsors, is retired from the computer industry. For the past 3 years he has volunteered (600 hours) at Redmond Elementary with a 40% Free and Reduced Lunch, 40% pass rate on the 4th grade math WASL. The school has failed AYP for the third year in a row.

Mr. Orbitz gave a brief summary of the program presented at the Math Information Night and shared data from Lake Washington and Bellevue School Districts demonstrating WASL pass rates over time and the achievement gap between white students and black/Hispanic students and students with Free/Reduced Price Lunch. His slides are attached. Committee members asked questions and indicated that they were generally very familiar with the data presented.

Recommended reading: *Visible Learning: A synthesis of over 800 meta-analyses relating to achievement* by John Hattie, Routledge; 1 edition (December 24, 2008) ISBN-10: 0415476186

Why Don't Students Like School: A Cognitive Scientist Answers Questions About How the Mind Works and What It Means for the Classroom by Daniel T. Willingham, Jossey-Bass (March 16, 2009) ISBN-10: 0470279303

At 5:05 the Committee took a short break. The remainder of the meeting was spent looking at the data collected during the pilot.

Discussion of the data is summarized below:

Data Set	Observations/Questions
Math Pilot Student Surveys N = 2641	<p>Student and parent responses were reported as percentages. We discussed what a “significant” difference would be, given the statistical reliability of the data. We agreed that if the responses were greater than 6% difference between the Holt and Discovering pilot experiences, that it would be considered to be significant. The only responses that were significantly different were:</p> <ul style="list-style-type: none"> • 2C#1 <i>How often were you working independently?</i> Often was reported 9% more frequently for Holt • 2D <i>How often were you working with a partner or in a group?</i> Often was reported 11% more frequently for Discovering Seldom was reported 9% more frequently for Holt • 7 <i>There were enough practice problems for me to feel confident that I learned the math.</i> All or most of the time was reported 8% more frequently for Holt <p>Questions/Answers:</p> <ul style="list-style-type: none"> • Of the 2641 surveys, how many were Holt and how many Discovering? 1,475 Discovering and 1166 Holt • When were surveys completed? At the end of each piloted unit. • Was there any baseline data collected regarding the questions? No <p>Observation: # 9 <i>Were you able to understand what you were reading when you worked outside of class?</i> Responses on both parent and student surveys are not significantly different. 70% selected All or most of the time for both.</p>
Math Pilot Parent Surveys N = 1446	<p>The only responses that was significantly different was:</p> <ul style="list-style-type: none"> • 7 <i>Rate the confidence level of your student when working on problems outside of class</i> Very confident was selected 9% more frequently for Holt <p>Questions/Answers:</p> <ul style="list-style-type: none"> • Were the surveys sent in other languages? (No) • Do we know which schools returned the parent surveys? <p>Observation: Both student survey and parent survey, the online resources were not frequently accessed. Helpful was selected less than 20% for either</p>
Math Parent Textbook Review N = 20 Holt, 19 Disc	<p>This data was collected at the libraries from parents who were motivated to go to another physical location to complete the survey, so the number of people involved was very low.</p>

Teacher Pilot Survey Data	Observations/Questions
Instructional Balance N = 54	<p>Observations: Tye and Sammamish score the lowest and highest in every category listed. Chinook and Tillicum only had data from one of the books because the spring survey was different from the fall, and so only fall survey was reported.</p> <p>Comments: There is potential for inherent bias in the way the prompts were written. Some questions are framed in such a way that they would favor one material over another. The way you frame a question can influence the outcome. i.e. The use of the word “but” and “only”. The way that SHS and NHS teachers scored the prompts indicates “framed” statements.</p> <p>Questions/Answers:</p> <ul style="list-style-type: none"> • Would it be possible to chunk out the middle school data from the high school? See data • Breakdown between Algebra and Geometry would also be nice.
Cognitive Demand N = 72	<p>Remember we studied cognitive demand in depth during our committee meetings. The statements in the cognitive demand segments should not be viewed as value judgments, just the presence or absence in the texts.</p> <p>Observation</p> <ul style="list-style-type: none"> • <i>Little ambiguity about what needs to be done and how to do it.</i> Holt 35% greater than Discovering <p>Question/Answer:</p> <ul style="list-style-type: none"> • What was the deciding factor about whether data was broken out by school? The aggregate was needed for this area because the N values were so low. <p>Request to break out data by school to capture the inherent opinions</p> <p>OR look at the average results over all schools rather than individual schools.</p>

Teacher Pilot Survey Data	Observations/Questions
Instructional Strategies N = 72	<p>Comment: This is more fact – based - a report of what the pilot teacher chose to do, not everything that was included in the text. The presence of a particular instructional strategy does not mean that there was a positive outcome in terms of student achievement.</p> <p>Observation: The instructional materials are not the same, given this data set. The largest value is in the “sometimes” category for Discovering. For Holt the largest report was in the Large Group and Guided Practice.</p> <p>Question/Answer: <ul style="list-style-type: none"> • What is the importance of each of these instructional strategies to the teaching style and learning of students? We have no data to support an answer to this question. </p>
Student Experience N = 54	<p>Observations: <i>SE 3 The program is designed so students are active learners who are involved in investigating mathematical patterns in order to acquire new concepts.</i> On a scale of 1 to 5 Discovering scored 3.7 while Holt scored 2. SE 4 and SE 5 have similar results. <i>SE 2 Materials foster the development of rich mathematical conversation (i.e. math talk) in the classroom. Materials encourage students to expose their thinking and engage with one another in learning the mathematics.</i> Discovering = 3.5, Holt = 2.6.</p> <p>Question/Answer: <ul style="list-style-type: none"> • Is this the instructor’s opinion about how the students are thinking? Yes, teachers can observe students interacting with materials. </p>
Program Components	<p>Observations: <i>PC 7 Examples are available in the text.</i> Holt is 4.6 Discovering is 3.9 The rest had too little difference between responses to be significant. AS1 (supposed to be PC 8) Holt and Discovering are ranked equal.</p> <p>Question: <ul style="list-style-type: none"> • If students are working more independently, does that mean that students are not engaged in active learning? </p> <p>There seems to be a correlation or connection between many of the questions on the student survey and the teacher survey prompts.</p>
Universal Access N = 54	<p>Question/Answer Which of the schools have higher ELL populations?</p> <p>NHS has 10 ESL, all at advanced level in the program. SHS has 110, 18 are beginning at all levels. Bellevue has intermediate and advanced.</p>

Interlake does not have beginner ESL – all are advanced

Observation:
The schools with higher % beginning/intermediate ELL favor Holt.

4 – Materials provide help for students who are absent from school so they can catch up with their peers. Holt is 0.8 higher than Discovering.

The reading levels of both materials appear to be appropriate.

Sammamish and Highland have the highest populations of Special Ed students. SHS favored Holt for all prompts. We will break out the data for ELL and SpED for the next meeting. The chart below shows the number of ESL and Special Ed students taking our mainstream math courses in which the piloted materials will be used.

School Code	Students	ESL	ESL %	SpEd	SpEd %	Combined	Combined %
32-HIGH	457	76	16.6%	21	5%	97	21%
33-TYEE	775	4	0.5%	39	5.0%	43	6%
34-CHIN	900	57	6.3%	40	4.4%	97	11%
35-TILL	670	43	6.4%	43	6.4%	86	13%
37-ODLE	664	6	0.9%	31	4.7%	37	6%
49-INTL	514	0	0.0%	35	6.8%	35	7%
51-BHS	1,272	70	5.5%	82	6.4%	152	12%
52-SHS	881	108	12.3%	79	9.0%	187	21%
53-NHS	1,606	8	0.5%	73	4.5%	81	5%
54-IHS	1,225	59	4.8%	39	3.2%	98	8%
59-RMHS	149	4	2.7%	8	5.4%	12	8%

Teacher Materials
N = 54

Observations:
The only prompt with significant differences is TM13: *Teacher materials adequately explain or model any required manipulatives.* Discovering average =3.5, Holt = 2.8

All other responses indicate that both books are acceptable, on average.

TM 14: *The quality of the investigations inor explorations provided in the materials.* If you add excellent and acceptable, Discovering = 75% and Holt = 45%.

Overall Rating	<p>Observations:</p> <p>Looking at Overall Rating: <i>The program provides a rigorous, powerful mathematics education for all children.</i> Holt is acceptable at 3.0, Discovering at 3.7</p> <p>Discovering has 13% scoring less than 3 (acceptable), Holt has 32%.</p> <p>There is a greater difference between the texts in the overall rating compared with the individual components.</p> <p>Combined responses greater than 3 (acceptable) for Discovering = 70%, Holt = 32</p> <p>2 out 10 schools rated Discovering less than 3 (acceptable). 5 out of 10 schools rated Holt less than 3 (acceptable).</p> <p>High schools rated the texts closer, Discovering 3.6 and Holt 3.2 Middle school teachers differed more, Discovering 4.1, and Holt 2.4.</p> <p>Comment:</p> <p>The pilot experience was a short set of lessons, set within the context of the year-long course, which presented some difficulties.</p>
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Pilot Assessment Data	Observations/Questions
<p>8th Grade IMT3 – Exponential Models N = 488</p>	<p>The data set distributed is incomplete in that BHS is missing data for IAG 1. The N for each ethnicity is not included.</p> <p>We will distribute new data at the beginning of the next meeting.</p> <p>Would like the total for the whole test, in addition to the page 1 and page 2.</p> <p>Were identical questions given at the end of each pilot segment to both Discovering and Holt? Yes</p> <p>There is no information for the Algebra 2 unit included, Logarithms.</p> <p>Please tell how many students from each school were involved in the pilot.</p> <p>We will try to summarize the statistical relevance of data at the next meeting.</p>

Sharon then reminded the committee that the next scheduled meeting is March 11, 4-6 pm, location TBD. She then asked what more information is needed to help members feel ready to make a decision. We will share all the data with constituents. We need to discuss the special populations, ELL, Special Ed, Cascade, PRISM, etc. Break out each school by groups. Our goal is to adopt a textbook that will assist us in achieving the district mission to close the achievement gap and extend the learning for those students reaching mastery.

Dallas remarked that it is possible for students to catch up when given additional instruction, citing the experience of his teenage son. Both books look identical except with regard to reading.

Sharon stated that the next meeting will include a quick recap of today's meeting. Then we will engage in dialogue about the texts. You will identify your role (teacher, administrator, gifted rep, etc.) and what you are thinking about as the best material for use in BSD.

Committee members stated that they want to know how the work on the National Standards impact the Washington state standards and BSD courses. They also want to know more about the State Board of Education Strategic Teaching Report rating Discovering as mathematically unsound as well as the OSPI report that found both materials to be OK. Members suggested setting up informal meeting times to discuss the materials, issues, etc.

The meeting was adjourned at 7:05.

Kathee Terry

