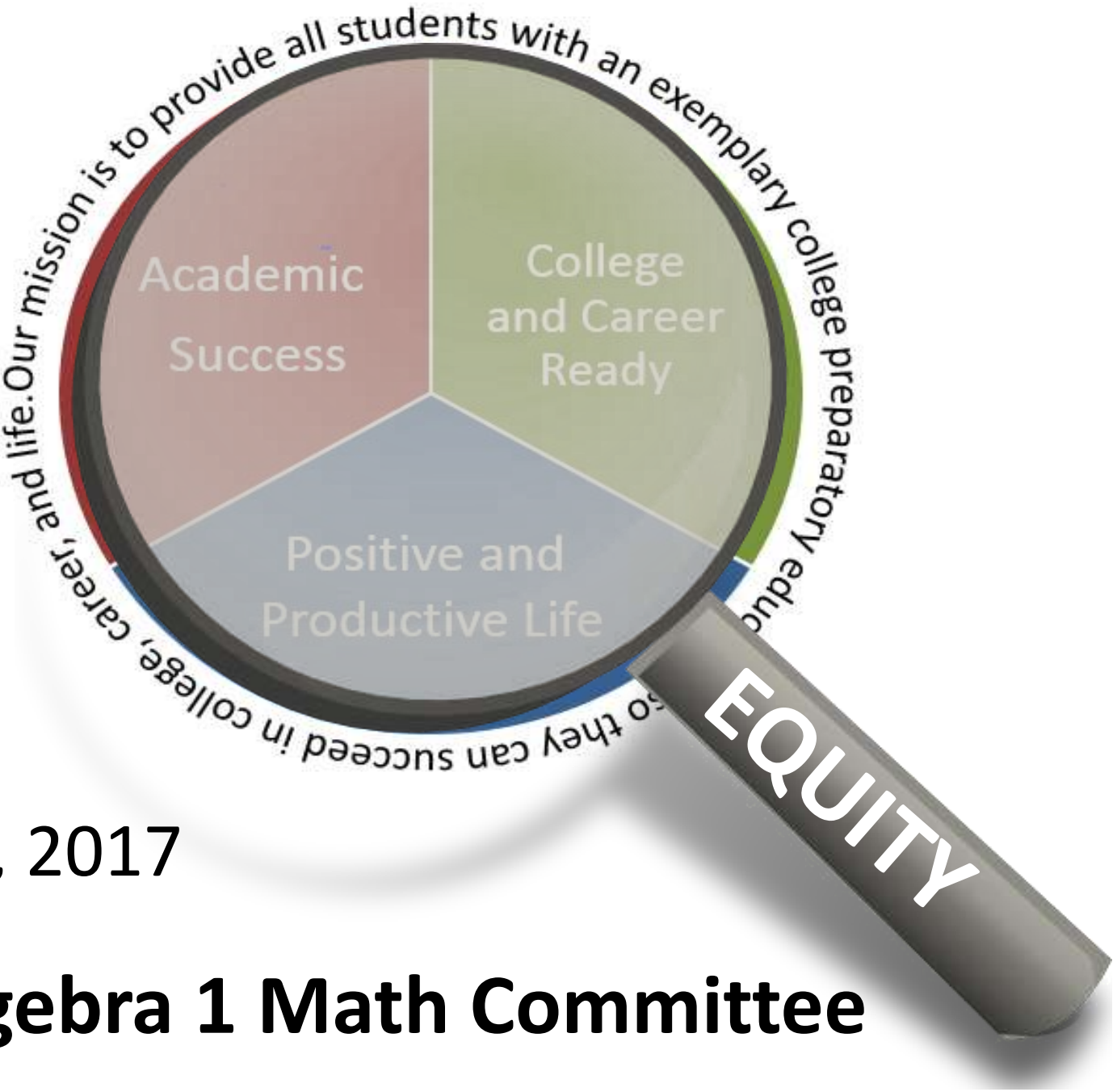


Jan 25, 2017

HS Algebra 1 Math Committee

Our mission is to provide all students with an exemplary college preparatory education so they can succeed in college, career, and life.

Agenda

- Check in
- Review materials piloted
- Make recommendation for adoption
- Review Block Model implementation this year

Algebra 1 Committee

Mary Takle & Sharon Kautz	Facilitators
Scott Powers	Administrator
Thad Williams	ELL
Rose Hadorn	Special Education
Andy McMaster	Bellevue High School
Amanda MacLeod	Big Picture
Andy Colleran	Interlake High School
Heather Lorge	Newport High School
Aubrey Creeden	Sammamish
Cheryl Thompson Antony	Parent Representative

Check-In and Welcome new members

- Please share
  - Your Name
  - Your school/role
  - When and where did you see a most beautiful/memorable sunset or sunrise?

Norms

- Using the cards when you want to speak
- Keep an open mind
- Time for technology breaks
- Don’t judge
- Be honest
- Assume positive intentions

Challenge and Goal

- We use the same materials and approach to teach our high school students Algebra 1 that we use for our MS students without great success. The goal of this committee is to find materials and an approach to best serve the unique needs of the students in this course.

Review Data

Task:

- Review data collected and make a recommendation for adoption.

Open IMC slides

HIGH SCHOOL ALGEBRA 1 / GEOMETRY BLOCK

Materials Adoption

MATERIALS PILOTED

- Mathematics Vision Project (MVP)
- Cognitive Tutor (CT)
- Agile Mind (AM)

Towards the end of the pilot implementation, we learned that the Cognitive Tutor resource as we piloted it will not be available in future years, it is undergoing significant revisions. When we looked at the proposed revisions, we realized that the new version would be significantly different and inferior to the resource we were piloting. The pilot team decided to ***report/not report*** *the Cognitive Tutor data to the IMC.*

ADOPTION PROCESS BEGAN MARCH 1, 2015

Teacher and pilot committee members examined texts and selected 3.

- Content aligned to Common Core State Standards and balanced between conceptual understanding, procedural skills, and application
- Equity
- Technology
- Assessments
- Overall impressions and connections to math practices

OTHER RESOURCES CONSIDERED

- Core Plus
- College Preparatory Math (CPM)
- Howard County
- Engage New York
- I can Learn Math
- Integrated CME
- Prentice Hall
- UCSMP
- Holt Big Ideas
- Pearson
- Glencoe

PILOT SCHOOLS

- Bellevue High
- Interlake High
- Newport High
- Sammamish High
- Big Picture – (partially participated)

UNITS TAUGHT

- Sequences (MVP)
- Equations (Cognitive Tutor)
- Functions Properties and Linear Functions (Agile Mind)
- Transformations (Agile Mind – BHS & MVP – SHS)

STUDENT DATA

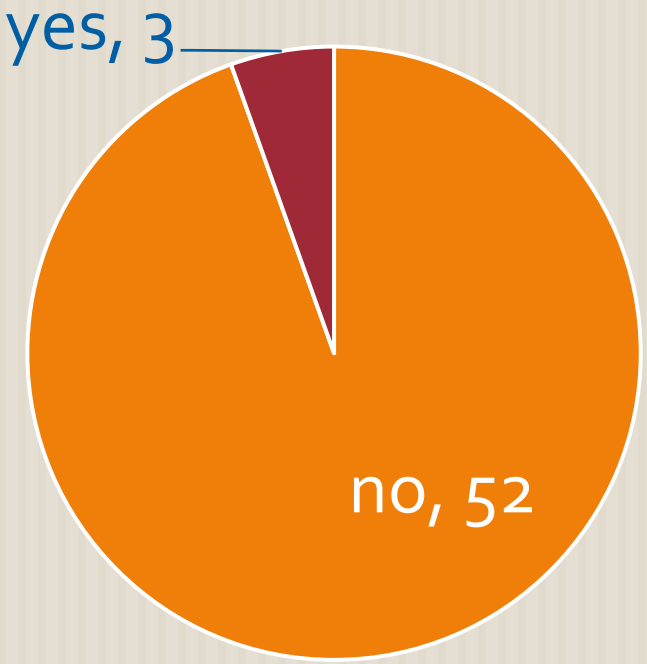
NUMBER OF STUDENTS SURVEYED IN FOCUS GROUPS

- Bellevue – 13
- Interlake – 16
- Newport – 10
- Sammamish – 16
- Total - 55

DID YOU NOTICE A DIFFERENCE BETWEEN MVP AND CT WORKSHEETS?

Most students did not notice a difference between the two resources.

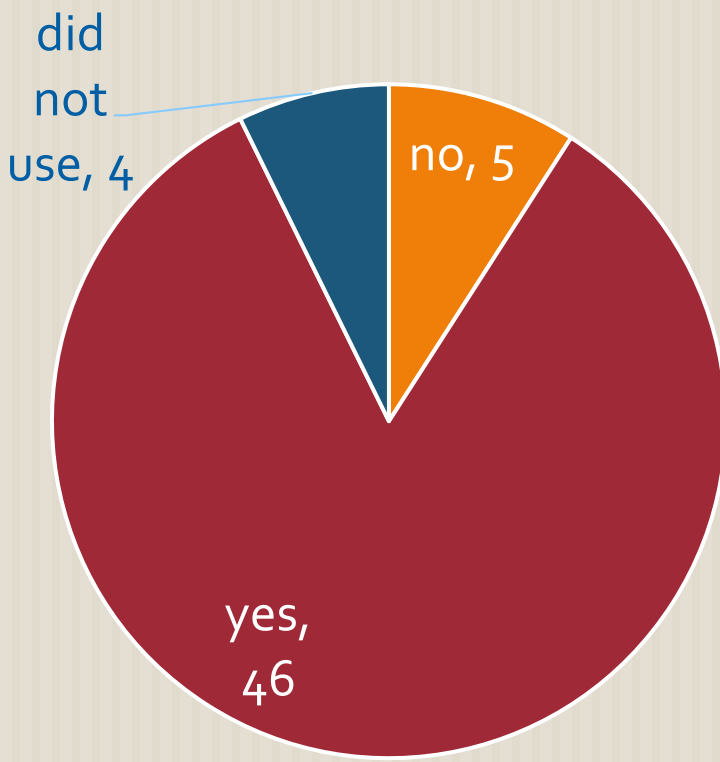
Students who answered "Yes", noted that CT worksheets were longer and had more questions about a specific problem.



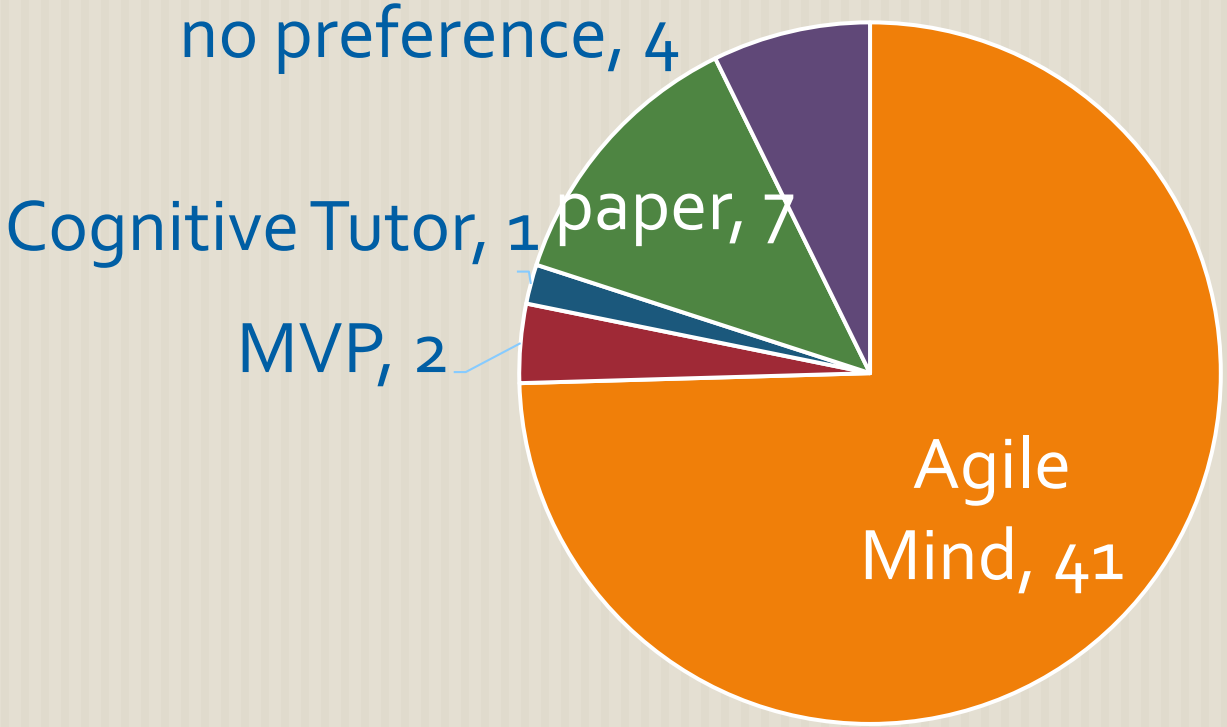
DID YOU LIKE AGILE MIND COMPUTER ANIMATIONS AND ONLINE PRACTICE?

"Easier to learn from because of video."
"I'm a more visual learner, it helped me a lot."
"I really liked the practice work feedback."
"You could figure it out on your own and did not need to depend on the teacher."
"It was helpful to manipulate the images, especially the skateboard problem."

Several students prefer paper worksheets
"Sometimes the computer was picky, then I just guessed until I got the problems right."



DO YOU HAVE A PREFERENCE?

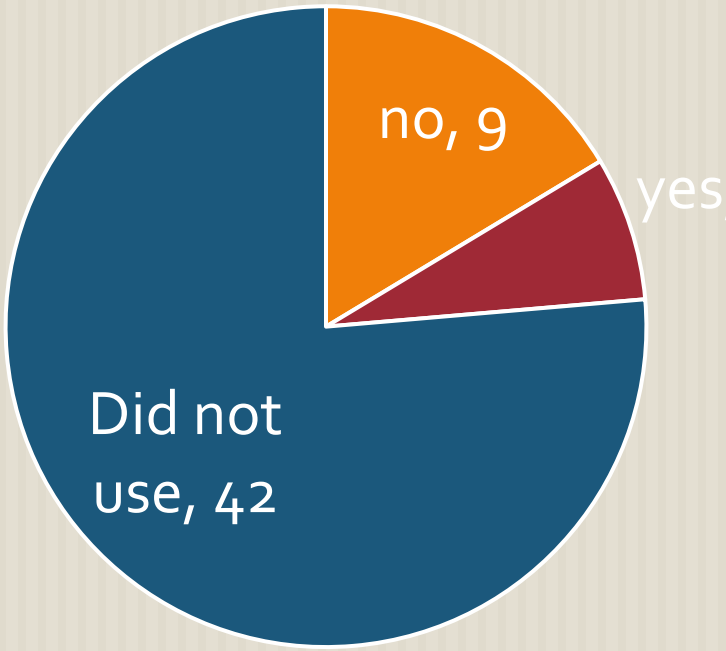


DID YOU FIND COGNITIVE TUTOR SOFTWARE HELPFUL?

Due to technical issues, only 1 school was able to use the Cognitive Tutor software.

Students said…

- "Super difficult.", "repetitive and frustrating"
- "Dropped my grade really low."
- "I understood the math in class, but the computer hurt my grade."
- "Get one thing wrong, it would add a lot of problems onto you."
- "Helpful, not interesting."
- "Annoying, you would get a lot right and 1 dumb mistake would make you start over."
- "Hard at first, one mistake sets you back."
- "Once you get the hang of it, it is helpful."
- "Doesn't let you fake it."
- "When you get it right there's satisfaction."
- "It made me proud when I got it."



COMMON THEMES FROM STUDENTS

- Many found the Agile Mind animations helpful for understanding
  - One student, when shown the function machine image not only described how it worked, but then was able to extend that reasoning to his cell phone and texting
- Agile Mind skateboard was memorable and engaging for most students; One admitted confusion and not really understanding it.
- Students who prefer worksheets wanted to see what they had to do and liked the layout/organization as it required them to not think about that piece and focus on the math.
- Student who preferred the computer liked that they could get hints, try multiple times and get instant feedback.

INTERESTING INSIGHTS FROM STUDENTS

- Relationship with my teacher is most important factor in my success
- The 2 period block allows plenty of time to learn the math at a good pace
- Not having homework really helps my grade because I don't usually get the homework completed. [Reasons: taking care of siblings, sports, don't usually understand how to do the work, don't remember to do it]
- Students like to do joint problem solving in groups

STUDENT ASSESSMENT DATA

STUDENT ASSESSMENT PROCESS

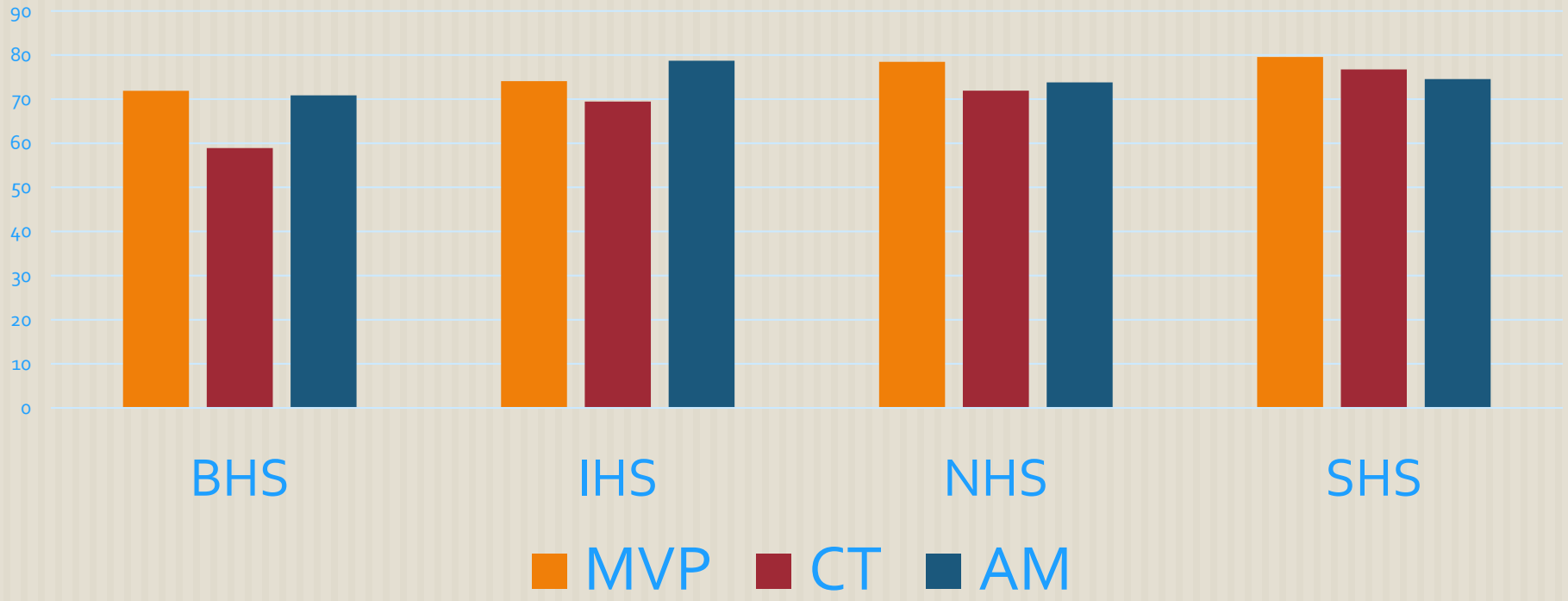
- At the end of each unit, students were assessed with common assessments at each school.
- MVP – the pilot teachers co wrote the assessment questions
- Cognitive Tutor – used the included assessment
- Agile Mind – Used the included performance task

STUDENT ASSESSMENT COMMENTS

Assessment data results were **inconclusive** because:

- Each unit was significantly different, so there was no good way to compare one unit to another
- Units were significantly different from previous years, so comparing to last year's units seemed inappropriate
- Each school implemented different grading practices and assessment philosophies
- Order of units/assessments may have mattered

AVERAGE COMMON ASSESSMENT SCORES



PARENT DATA

PARENT SURVEY PROCESS

- Sent email & paper survey home in English and Spanish
- Put resources on the BSD website & in all 4 local libraries
- Reminded students to bring results back to school

WEBSITE SURVEY

The High School Algebra 1 Adoption Committee is in the process of selecting a new textbook. Beginning this fall, the high school Algebra 1 block course (grades 9-12) began piloting three instructional resources: *Mathematics Vision Project, Cognitive Tutor* and *Agile Mind.*

The committee is inviting families and community members to review the materials and submit feedback. All materials are available for review until Dec. 15, 2016.

Mathematics Vision Project

- English
- Spanish

Cognitive Tutor

- Lesson 2.1
- Lesson 2.2
- Lesson 2.3
- Lesson 2.4

Agile Mind

- explore.agilemind.com
  Username: Parent1
  Password: AgileMind
- View the Agile Mind Quick Start Guide.

Submit Your Feedback

PARENT SURVEYS RESULTS

No parent surveys were returned

TEACHER DATA

TEACHER SURVEY RESULTS

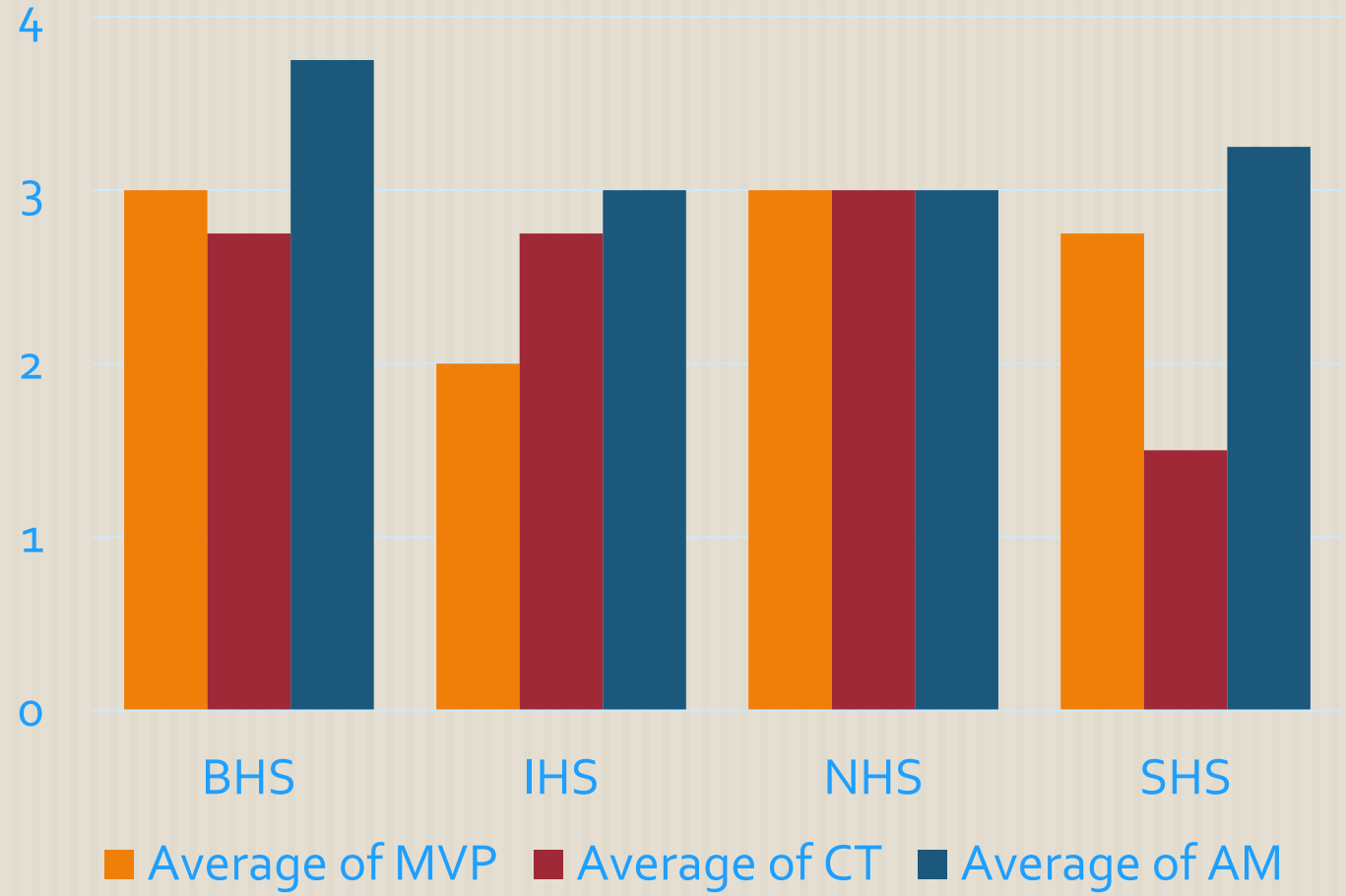
15 of 17 teachers responded

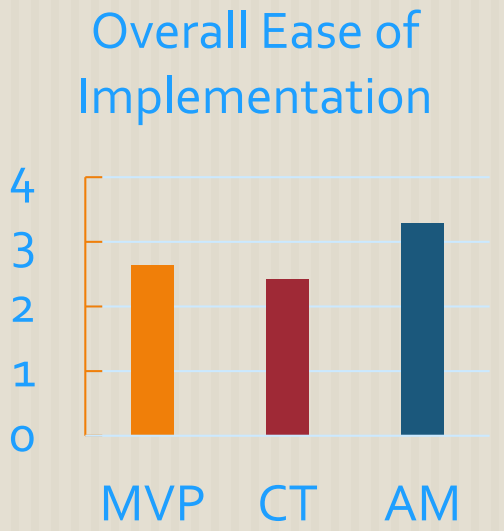
Big Picture was originally included in the pilot, but due to their implementation (only 1 period for math), they have not had an opportunity to try all of the resources and there is no data from them.

2 Special Education Teachers did not respond.

I WAS ABLE TO IMPLEMENT THE RESOURCE WITH…

4 – little to no modification
3 – some modifications
2– many modifications
1 - mostly unable to use



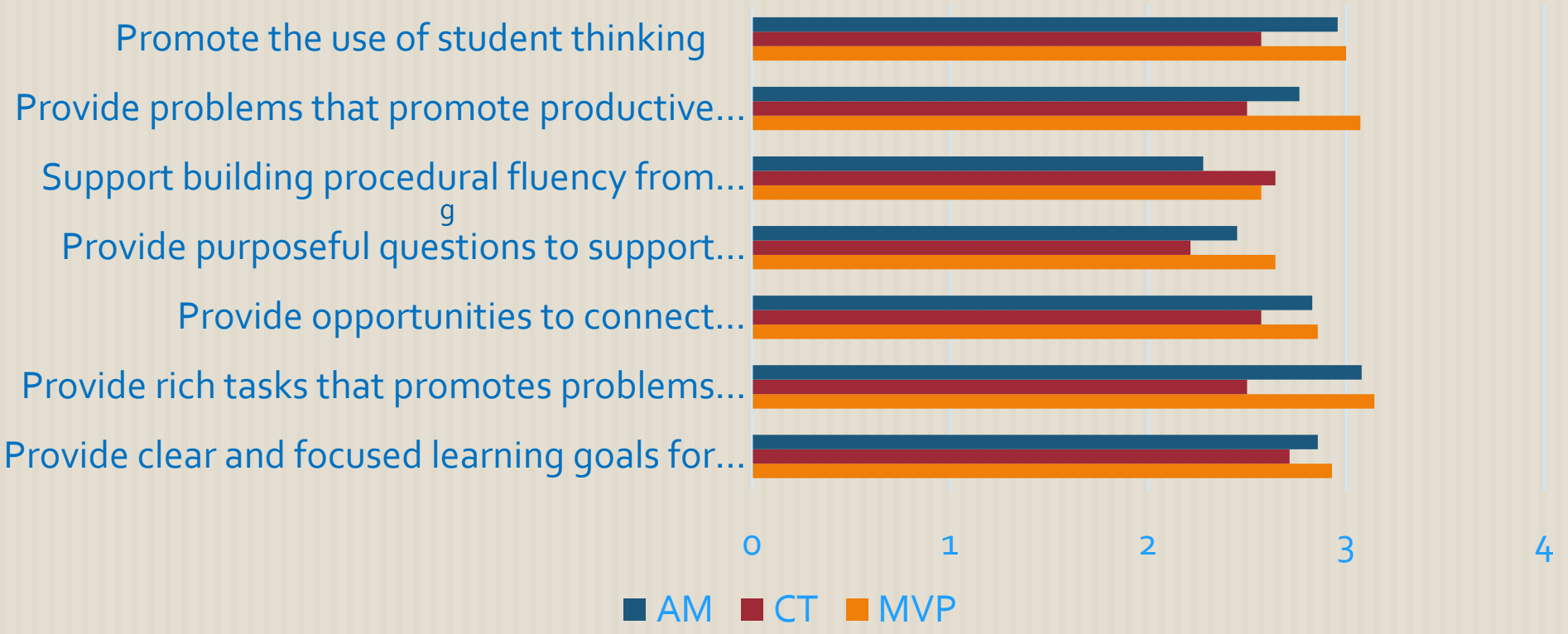


TEACHER COMMENTS ABOUT IMPLEMENTATION

- "Agile Mind was far easier to implement because of how it is structured."
- "Overall Agile Mind has seemed to be the easiest to utilize with the teacher guides."
- "I really like the use of the applets integrated into it without having to search for them ourselves."
- "It (Agile Mind) scaffolds and spirals more than any other curriculum we have used. It makes Algebra 1 more accessible for all students. "
- "Agile mind took slightly less adjusting than Mathematics Vision Project, but both required some modifications."
- "With more focus, any of these would be easier to implement. Out of the box, Agile Mind was the most user friendly, MVP the most geared towards groupwork, and Cognitive Tutor the most uncomfortable to implement (it was too rigid, not applicable to most of our students' lives, and monotonous). "

TO WHAT DEGREE DOES THE RESOURCE …

1 – Very little to none 2 – Marginal 3 – Acceptable 4 - Exceptional



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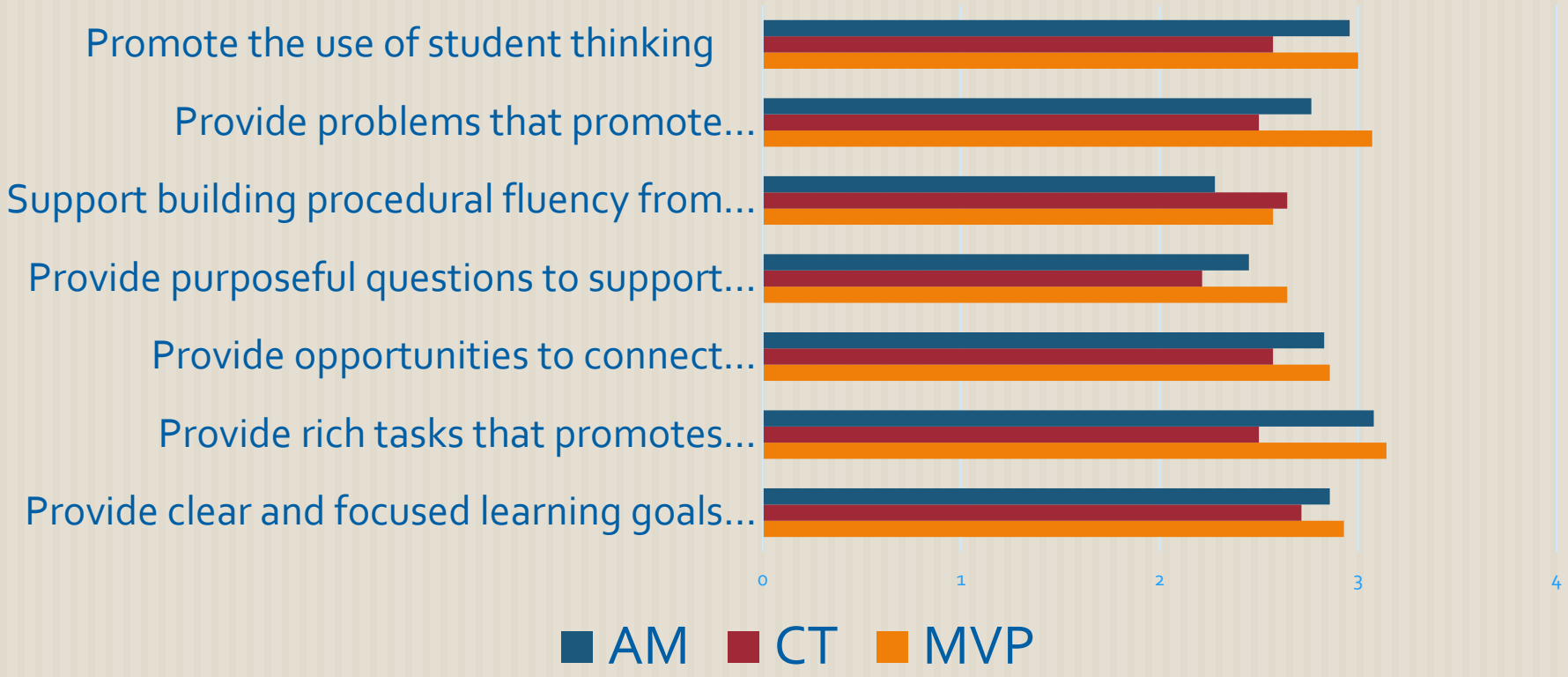
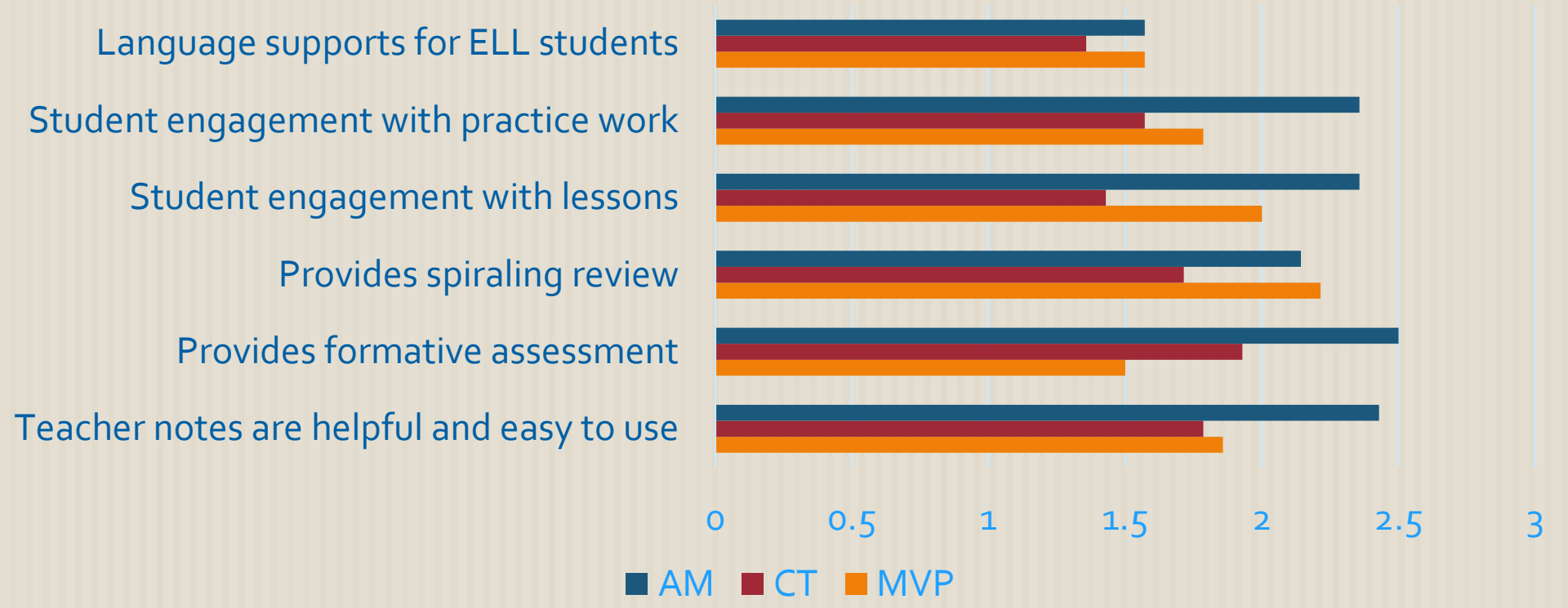


RATE EACH ITEM FOR THE RESOURCE …

1 – Low 2 – Medium 3 - High



COMMENTS ON **MATHEMATICS VISION PROJECT**

- "Most of practice and review involved repetition until mastery."
- "This would be a very difficult curriculum to adopt as our primary. It is incredibly wordy, which is difficult for our ELL students, our IEP students, and our low readers. It does, however, provide some really rich tasks and good questions to help students dive in, mess around with, and discuss important concepts."
- "We started in an awkward place in the curriculum so I don't feel that we got a good idea of how this would work in our classrooms."
- "I feel as though this would be good to use as supplemental material for another curriculum."
- "No technology."
- "Too open ended, and not enough practice for my tastes."

COMMENTS ON **MATHEMATICS VISION PROJECT**

- "Biggest issue was that we struggled to get students to engage with the rich problems. Biggest strength was that it seemed to be slower and allowed you to focus on a smaller number of objectives for a longer period of time."
- "MVP had good "deep lessons" that asked students to think and connect. It was just a lot at the beginning of the year when we were trying to figure out a new curriculum, new students, new computers, etc. The teacher notes were useful and there were good practice problems. I just like when there are assessment options and more practice options, which was limited in MVP. Another complaint would be the lack of glossary and that it doesn't feel as much like a "book". I understand that we may be getting away from that in general, so it just needs to be a switch in my mind."
- "I would like this as an option for supplementing Agile Mind."

COMMENTS ON **COGNITIVE TUTOR**

- "The non-computer portion of this curriculum was good and I liked its layout and problems."
- "The software portion needs to be updated by CT in order for it to be usable. If they wish their software to be used, it needs to be accessible in all browsers and therefore should not require Java to run."
- "The website would have been great if we could access it."
- "Software is excellent … student/teacher materials more than adequate."
- "Not an option due to not being available for next year. If the software ever comes back would be a great extra practice supplement."

COMMENTS ON **COGNITIVE TUTOR**

- "I was not able to get the online program working so I can't speak to that part at all, unfortunately. I know that those types of tools can be really useful to students."
- "As for the curriculum, there was a lot of good basic practice, it felt like a book or curriculum and there were assessment questions available. However, this curriculum did not offer the same in depth or investigation questions as the other two and those are what are harder two write than a basic math worksheet. I would prefer to have a curriculum that has the "rich tasks" or "investigations" created and I can supplement with practice from elsewhere."
- "The software is the most powerful piece of this curriculum. Without it, I'm not a fan."

COMMENTS ON **COGNITIVE TUTOR**

- "This was not pleasant. The work is monotonous and disjointed, the software is weirdly demanding of precision, making it frustrating for both teachers and students (if students were able to describe "number of hours spent building" when the software was looking for "number of hours worked" for example). Many of the situations were frustratingly oblivious to the situations of our students (like that a club was going on a trip and each student was bringing $300 spending money). There was little guidance about how to present the material."
- "This curriculum was not appropriate for our students."
- "I really liked the structure of this curriculum."
- "We can't even use this next year since they are redoing it…"
- "I do not like this curriculum and would not like to adopt this."

COMMENTS ON **AGILE MIND**

- "Agile Mind had good problems, but I did not like that they provide slides. I prefer to make my own presentation, especially as my students were not interested in the slides agile mind provided. Similarly, my students did not work well with the online material."
- "Our students have engaged with these problems the best. There has been more math talk, more whole class discussion. The built in applets seem to not only draw students in but also increase conceptual understanding. The teacher guides have made this the easiest to implement as well. The online quizzing paired with constructed response makes it convenient for multiple assessment opportunities."
- "I've loved working with the Intensified AM curriculum! It provides fantastic spiral review, and tasks built into the curriculum that I wouldn't have expected. For example, we did a gallery walk last week, and this week we have a matching activity. These are things I would have had to create on my own with other curriculums."

COMMENTS ON **AGILE MIND**

- Students really appreciated having the practice on the computer with instant feedback, and I liked seeing their results. I liked the interactions in the lessons and it felt that the students were able to draw important conclusions from their own explorations. It was relatively easy to plan lessons (what the teacher would do, what the students would do, what the practice would look like) and was easy to align with stated goals. While there were a few desires for the software that I would have liked to see, overall it was the richest, easiest to use option.
- Best of the three but not that great.
- Online resources are awesome … student engagement was highest here.
- It is nice that students can translate the material directly on their own computer to any language.

COMMENTS ON **AGILE MIND**

- "I have enjoyed this curriculum more and more as I've become more familiar with it. I like the online videos and the student pages. It has taken time to make a connection between the two and to teach kids how to use the curriculum as a "book". One problem is the ability to use the OneNote because I don't want them flipping back and forth too much between two screens, but printing worksheets is not terrible.
  I have made the decision to do some supplementing with more basic math practice when the way Agile Mind builds a topic seems like it will take longer and we've needed to keep moving, but I think when we approach the curriculum from the beginning of the year we will have more time to work through all of their lessons.
  The students respond very well to the assignment of homework through the internet rather than a worksheet.
  I also like the various practice options and the assessment options as well.
  There is a glossary and since the curriculum is IN the internet, the kids can use the google translate button - AWESOME for my ELL student.
  Overall this is my favorite and I know I'll like it more and more with continued time to teach with it."

TEACHER RECOMMENDATION FOR ADOPTION

	MVP	CT	AM	
NHS		x		I was not thrilled with any of them, but if I had to pick one, it would probably be cognitive tutor without the software and maybe agile mind (for the problems they have)
NHS			x	I like agile mind because the website is workable and there is a good amount of content to choose from. It seems to move better from one concept to the next.
BHS			x	Agile Mind, with supplements
BHS			x	
BHS			x	
BHS			x	
SHS			x	
SHS			x	Agile Mind for Algebra 1 with supplementary materials from MVP for certain Algebra standards and Geometry.
SHS				
SHS			x	Given the 3 pilot options Agile Mind was the best choice for our students.
IHS			x	Adopt Agile Mind as the baseline curriculum, with MVP as an supplement.
IHS			x	I would prefer Agile Mind over MVP.
IHS			x	AM if I had to chose between these but I feel like there has to be something better out there.....especially for our ELL students.
IHS				

COMMON CORE ALIGNMENT

ALGEBRA 1 STANDARDS

Agile Mind missing some standards & alignment is disjointed

The existing structure does not follow the conceptual development recommended by CCSS.

Completely missing Arithmetic & Geometric Sequences standard. Missing a few other lesser standards.

MVP extremely well aligned to CCSS standards

Every Algebra 1 standard is included and the unit follow the conceptual development recommended by CCSS. Course development threads key standards through multiple units.

GEOMETRY STANDARDS

Agile Mind significantly out of alignment in Geometry

Missing several standards and the existing structure does not follow the conceptual development recommended by CCSS. The Geometry portion looks very similar to Geometry courses that existed before CCSS. It also includes content/depth we no longer need to teach.

Completely missing Conditional Probability Unit.

MVP extremely well aligned to CCSS standards

Every Geometry standard is included and the unit follow the conceptual development recommended by CCSS.

HOW IS CCSS ALIGNMENT DIFFERENT?

WHY IS CCSS ALIGNMENT IMPORTANT?

SBAC assessment questions – Claims 2 & 4

Rigor and Relevance redefined

- Reduced number of topics
- More connections between topics

INSTRUCTIONAL PRACTICES

MVP

- Student Groups working on rich tasks – promotes productive struggle & student centered classrooms

CT

- Whole class & individual. Leans towards teacher centered instruction.
- Detailed level of procedural practice

Agile Mind

- Whole Class & Individual. Leans toward teacher centered instruction.
- Activity Based
- Applets that can be manipulated for clarifying key concepts

RECAP

Students

- Agile Mind because of interactive capability & immediate feedback

Teachers

- Agile Mind

CCSS Alignment & Instructional Practices

- MVP

QUESTIONS? WONDERINGS? DISCUSSION?

WHAT SHOULD OUR RECOMMENDATION TO IMC BE?

- Cognitive Tutor?
- If no CT, do we include CT in the IMC presentation?
- Agile Mind?
- MVP?
- Agile Mind with MVP as supplement?

Decision Making Process

The culminating activity of the math adoption committee will be to reach a decision regarding which math program to recommend to the Instructional Materials Committee for adoption.

Each committee member has one vote that must be exercised.

No abstentions will be allowed.

A clear recommendation will be indicated by a super majority of >60%, 7 of 11, in favor of one of the materials.

Consensus

Thumbs Up: I think it's a good decision and will advocate for it.

Thumbs Sideways: I am comfortable with the proposal but would like to discuss some minor issues.

Thumbs Down: I still need to discuss certain issues and suggest changes that should be made.

Vote

All committee members must be comfortable with taking a vote before the voting is implemented.

This comfort level will be identified by a *thumbs* consensus vote with all members based on the question, “Do you have enough information about the three instructional materials to make an informed recommendation to the Instructional Materials Committee?”

Once all members show thumbs up, the committee members will vote to select one material over the others.

Let's take a Vote

Person	Vote – Are you ready to take a vote?	Do you agree to recommend Agile Mind with MVP as a supplemental resource.
Mary Takle	Thumb up	Thumb up
Scott Powers	Thumb up	Thumb up
Rose Hadorn	Thumb up	Thumb up
Andy McMaster	Thumb up	Thumb up
Amanda MacLeod	Thumb up	Thumb up
Andy Colleran	Thumb up	Thumb up
Heather Lorge	Thumb up	Thumb up
Aubrey Creeden	Thumb up	Thumb up

Discussion & Next Steps

- Present to IMC – end of April
- Director of Curriculum will present to the school board in May.
- Building Master OneNote - May/June/Summer
- volunteers?
- Algebra 1 teacher PD – summer
- Supplemental Materials?

Review Block Model

Discussion on this year's implementation variations

Examine the model for next year

Open Alg 1 model slides