

Pilot Teacher Comments

(submitted via email)

Newport High School (Holt)

I consider myself an engaging teacher that can get and sustain student attention, however, two days after starting the pilot of the Holt materials I found multiple students putting their heads down and nodding off. I've never had this problem before in my classroom.

The students often finished all their work in class and did not have any homework to do at home. No students came to tutorial for help during this pilot. All of these may have been benefits, except the test results showed that the students had not learned the material. Some of the lowest scores of the year.

There is one student that does not like to do work on his own, he really enjoys the group model. He is one of those students that will unite a group of students in discussion about the math. On the first day of the pilot, after I set the students to work on their own, he wanted to work together. "Hey what'd you guys get for the first answer, I got..." He was quickly interrupted by another student in the group – usually also a good group member, "Let's just do all the problems on our own and then we can discuss our answers". The first child put his head down and got to work.

I found that my job was significantly easier and my collaboration with other teachers also diminished. The conversation changed from discussions about difficulties in getting students to understand an important concept quickly changed to discussions about page numbers and problems to assign.

Highland Middle School (Holt)

I wanted to share a few comments/thoughts about the Holt pilot I just completed.

My students took the pilot version of the Power Models unit test on Friday. None of them finished during class. Some finished in tutorial on Friday and most will need to finish in tutorial on Monday. They **all** struggled with the test! I've never had students have such a hard time grasping the concepts of the Power Models unit.

I feel that the Holt materials did not prepare them well for the test. Holt seems too practice problem based or "drill and kill," but doesn't give them the big picture ideas. The students could work with the example problems provided in the textbook and then repeat the process in the practice problems, but out of context on the test they we're confused. One boy was in tears he was so frustrated during the test. In particular, the two quadratic story problems on the test (rocket and tennis ball) caused the most difficulty. In the Core Plus materials, I recall spending about a week on story problems of that sort, but in Holt there was only one day's lesson on the concept.

Newport High School (Holt)

This text (Holt) is written for the lowest common denominator. The students found it very easy to get their work done. The 28 kids who I polled anonymously all said it was too easy and very, very boring. There is no higher-level thinking. In the exercises, the text tells the kids exactly where to find the same type of problem in the examples, then pulls that crutch away and gives them the exact same problem with a very minor number change over the course of the next zillion problems. The "word problems" are just that – words. They don't connect to anything interesting, are short, and devoid of any original thought. How many times do we have to find the area of something in order to use a quadratic or to factor? There isn't one ounce of problem-solving in the sections I covered.

I would like to ask the parents of students in our district who are pushing this text: "Do you really think your child is this stupid to require a book with such low standards?"

Sammamish High School (Holt)

I did Holt and found it to be exceptional in all areas...lots of extensions, good reteaching tools for the slower learners...have yet to give the test...but I was impressed with the book. As a whole – it is much better than the core. The discovery is adequate, the problem solving (as always) provided challenges but the students rose to the occasion...the student solved the examples!

Sammamish High School (Holt)

While studying for the unit test, a remarkable thing happened. A student came up and asked to borrow a Holt book. She flipped through the book to section 6.4, Solving Special Systems, and found a graphic organizer for classification of systems as consistent or not and dependent or not. After a minute of studying this graphic with her study partner, she asked me if the concept was on the test. In short, she used the book as a reference for a topic she had anticipated would be on the test. She easily found the information she was looking for and was able to trigger her existing knowledge using the organizer there.

I used a significant amount of the supplementary materials for this lesson. I gave a lesson quiz after the Holt material which was mathematically difficult and students struggled a little bit. I, therefore, used the worksheets included in the supplementary materials to remediate students. I graded their performance on substitution and elimination and used the “re-teach” worksheets paired with one of the appropriate level practice worksheets. If students performed poorly, they got the “A” level worksheet, if students performed adequately, they got the “B” level and if students excelled, they got the “C” level. After a day of remediation, I re-quizzed the Holt material. The average increase in score was approximately 27% in one class and 32% in my other class. Of the 45 students that participated in the re-quiz, only one student scored lower on the re-quiz than on the original quiz.

Bellevue High School (Discovering)

Lastly, I should point out that the Discovering section on the logarithmic properties (the Investigation in Section 5.7) and the development thereof was inferior to the Core-Plus development of those same properties (U3, L2, I2). Not only was the establishment of those properties more rigorous (with the notion of demonstrating why those properties must be the case (example: Exercise 2c in the Core-Plus text), but the connection between the rules of exponents and the rules of logarithms wasn't as strongly supported in the Discovering text as the Core-Plus text. On this, I think, Discovering could use some significant improvement.

Robinswood Middle School (Discovering)

I'd like to comment about the Discovering book, if I may. I was noticing some over repetition of linear equations that is currently covered (better I think) in the current 7th grade curriculum. I wasn't over impressed with the book and many students preferred the current curriculum instead. I'm not sure how the Holt book will work out, but I'm not in love with the Discovering.

Newport High School (both programs)

I loved the exercises in the *Discovering Algebra* text. I thought many of the problems were very thought provoking and provided students with the opportunity to “think” and to apply the concepts they learned in a way that was not quite like the way they learned them. This is excellent for the students.

On the other hand, I thought that the exercises in the *Holt* text were all like the examples in the lesson. Even the application problems were just like the ones in the examples and they seemed rather “forced”.

Tyee Middle School (both programs)

Having piloted both *Holt* and *Discovering* in 8th grade IMT 3 classes and HIAG 2 classes, I have observed the following:

- Before students can begin doing math in *Holt*, they need to do a lot of reading and understand what they read. This is a big change from CMP, which my students are used to. The majority of my students don’t want to read. They ask, “Can’t we just start?” The investigative approach of *Discovering* usually allows students to begin a lesson with a mathematical investigation before reading through examples. The investigations then provide a basis for the day’s work and a reference point for how to do the math being learned.
- I was really excited by the three levels of worksheets provided by *Holt*, especially the ones to help my struggling students and those to challenge my more advanced students. In using these worksheets I found that the challenge worksheets were too easy for my students. They finished in a matter of minutes. After reading the re-teaching worksheets, many students said, “I still don’t get it.” I was disappointed that these weren’t as helpful as I had thought they would be.
- When my IMT 3 students were using *Discovering*, I heard a lot of great mathematical conversations, “math talk” within groups, between partners and also whole-class discussions. Students were engaged in doing math and talking about math. With *Holt*, it took the majority of the class period to read through or go over the examples. I saw a dramatic change in the level of math talk in class. When I asked students why they were doing a problem a certain way, they responded, “Because that’s what the book says.” They couldn’t explain why something worked.
- With *Discovering*, I sometimes had to create additional practice worksheets because I felt like my students would benefit from more practice. With *Holt*, there was an abundance of practice, but it lacked variety and depth. I find it easier to create practice worksheets as I did at times in *Discovering* than to make a rich investigation, as I feel I would need to do with *Holt*. (*Holt* has some “explorations,” but they weren’t the type that would allow students to make connections to mathematical concepts that they already know.)
- *Holt* lacks depth and rigor. The beginning of each problem set has many “guided practice” questions. These tell students exactly what example to see in order to do the problem. Students do not even have to think about how to do the problem, they simply do it the same way as the example. How does this prepare our students for higher math? Our students need to be able to look at a problem and choose an appropriate way to solve it.
- *Holt* is weak on problem-solving and light on critical thinking. I wish it had more problems like the “error analysis” type that have students explain their thinking.
- *Discovering* has a lot of context-based problems. *Holt* does not. Math in life is in context. Students need to be able to do math in context. Without context, students ask, “When am I ever going to use this?”
- I like that in addition to the investigations, *Discovering* also has examples. Additionally, I found the “Condensed Lessons” to be helpful for students who missed class.

Sammamish High School (both programs)

In my experience piloting I found the Holt supplemental resource materials to be much more helpful and useable than the ones provided with the Discovery book. Not only were there a lot more materials, but they were well organized, easy to find, and in some cases editable. They were also available in different levels, for ELL students, and in Spanish.

In my experience with piloting the Discovering program, I was unable to find sufficient supplemental resources, and frequently found myself cutting up copies of the few pieces I could find and taping them together so that my students would have enough practice with the topics that were relevant to what we were doing in class.

I am very concerned that if we adopt the Discovering program I will be putting my IAG1, ELL, and SpEd students at a disadvantage because these are the kinds of students who need clear examples to refer to, clear definitions of vocabulary words, theorems, and formulas. Even though the reading level of chosen pieces of text is similar between the two curriculums, I worry about the *amount* of reading in Discovering. The sheer number of words on a page in the Discovering books compared to the Holt books is something that will turn my non-readers and non-English speakers away from the mathematical tasks.

One of my most discouraging experiences with the Discovering program was when, excited to finally have a book with a glossary(!) I turned to the back to look up Linear Pair of Angles, only to see that where the definition should be it said "You define this term in the Investigation Defining Angles (50)"

Thank you for taking the time to consider my comments!

Here are my comments about the different curriculum-

After piloting both curriculums I found the Holt curriculum to reach the full spectrum of students through the layout of the book and also through the supplemental resources. Within the resources there is a Reteach section to help support the struggling students and also a challenge section to help the advanced students extend their content knowledge. I also found the range of resources very helpful in teaching a Seminar class. The book was a great resource in Seminar when having students create word walls because it provides a user friendly glossary and an additional glossary with the words defined in 9 other languages. When piloting Discovering I found it more challenging for my struggling students and ELL's to complete all of the tasks required in one step- I found the steps to contain multiple tasks within one step. Students were more successful in the lessons when I broke down each step into multiple steps which required me to rewrite the investigation. Discovery also does not have a large resource bank of extra questions. In conclusion, if we are adopting a resource book Holt is the best choice.

Let me know if you have any other questions- Thanks a bunch! 😊

Here are my thoughts.

After considering both textbooks, Holt is the only choice in my mind.

It appears to be the district's position that we are adopting a reference book, not a curriculum. Therefore, the only logical choice is the Holt textbook. It is a reference book. While Discovering is a step above Core in terms of reference material, Holt is far superior. ESL students can access some materials in something like 8 different languages, not just Spanish. Practice worksheets come in three different levels. Every lesson is online if students miss school. The sheer number of resources for struggling and succeeding students makes Holt the clear choice.

I'd like to share an example of how I used these Holt materials to support my students. I gave a quiz from the book for the lesson I piloted. It went somewhat poorly. So, I assigned everyone the "reteach" worksheet that corresponded to their grade on the test. If they scored in the lowest third, they got a C level, if they scored in the top third, an A level. After working on these worksheets in class and at home, and a little whole class review, students took another version of the quiz. The scores improved an average of 5.7 points in my class of 27 (5 ESL, 2 Sp. Ed).

More plainly, the Discovering text fails my students. On the Holt pilot tests, students earned an average of 76%. On the Discovering pilot, those same students earned an average of 36.5%. Even counting the difficulty of the material or the quality of the tests or the phase of the moon or whatever other hidden variable affects these results, this is a significant difference.

The main benefit of the Discovering textbook is it gives students a concrete situation to refer back to. This is useful if students understand or care about that situation. I piloted the function notation unit in Discovering. It is my opinion that the "coding" introduction to functions fulfilled neither of these requirements. Students who are just learning English found the directions and results just as confusing as any Core Plus lesson. The rest of the students appeared to find no application to their lives and very little reason to become engaged. If we were to go with a curriculum completely based on discovery learning, it would benefit each teacher to write situations and investigations that directly applied to their students. For example, a function lesson could be based upon student schedules or some similar problem that maps one set of data to another that students actually care about. Holt would be able to provide the reference material for the math behind this situation but the teacher would provide the experience that students will connect to because they care about or because it applies to them. Discovering only offers one, narrow approach and therefore limits student engagement and success.

We absolutely must choose the Holt textbook if we really want all students to succeed.

Odle Middle School (both programs)

There are benefits to each curriculum, but I believe the benefits of Discovering outweigh those of Holt. Eighth grade students absolutely need a hands-on, engaging curriculum. Discovering is set up in a way that allows students to learn the math while solving a contextually based problem. Holt has students learn the algorithms, processes, and formulas first and then allows students to apply what they have learned to a problem. Unfortunately, students can get so overwhelmed by the multitude of problems on the page, that they lose momentum by the time we get to the problem solving. Students must learn problem solving skills in mathematics. They need to know how the math applies to "real life" situations. We have to make the math relevant and meaningful to them. Discovering provides this.

However, for eighth grade, our current curriculum, CMP2, far exceeds both Holt and Discovering. My students cannot understand why we would be giving up this curriculum. They really enjoy it, and they learn the math and its application. I am very saddened at the prospect of not teaching CMP2 next year. Middle school students should be using a curriculum designed for middle school students. The high school text books are not appropriate. My students perform best when they are using kinesthetic, visual, and auditory learning. They enjoy math and learn very well with the hands-on, group and individually based, engaging curriculum of CMP.

Phil Daro said that "districts that care will wait" to adopt new materials. I wholeheartedly agree that Bellevue should wait. What we have has worked over the past ten years. We have an extremely high number of students taking AP Calculus by senior year. We have many National Board Certified Math teachers. We need to wait.

Robinswood High School (both programs)

For the students at Robinswood, the Discovering Series is the best fit.

Both books use Geometer's Sketchpad for labs but the technology parts of the Holt series were difficult to follow and they used info for the TI-84 Calc which we do not have in our school.

Most of the investigations are already scaffolded, which we had to do for every lesson in the present series.

The technology parts of the Holt series were difficult to follow and they used info for the TI-84 Calc which we do not have in our school.

I used Holt last and followed the lessons as presented. It does have a lot of technology, but it is difficult to navigate and takes too long to change from the disk to the graphing calculator or another disk. By the time the technology was available again, I had lost the attention of the class, I always felt that I didn't have a smooth lesson.