

INSTRUCTIONAL SUBCOMMITTEE MEETING MINUTES
December 13, 2016
4:30 p.m.

Spencer Borden Elementary School
1400 President Avenue
Fall River, MA 02720

A roll call at 4:30 p.m. showed:

Mr. Coogan: Present Mrs. Panchley: Present
Dr. Costar: Present

Also present were Ms. Aimee Bronhard, Ms. Jessee Clements, Principal Sheryl Patterson, Principal Maria Pontes, Dr. Fran Roy, Mr. Matt Sakell, Ms. Fatima Silva, and Mr. Andrew Woodward.

Mrs. Panchley read the Open Meeting Law. A salute to the flag followed.

1. **Discussion:** Mathematics, Scope, and Sequence 6-12

Dr. Roy passed around a handout that would help them make sense of the scope and sequence. The packet contained the K-12 scope and sequence graphic, a copy of the Mass Core, and some general longitudinal data from MCAS on their math performance. In K-3, everyone gets the same curriculum in mathematics. Once Gate hits in Grade 4, it splits. For the Gate classes, math looks different from the rest of the district. In 8th grade they have a top-tiered class which really covers the first year of Algebra I. They also have a lower-level math class which they call Algebra IA, which is in line with the 8th grade standards. In Grade 9, there are four options. The Gate kids tend to go to the accelerated Geometry/Algebra II. The high-level kids in that Algebra I group will go to Geometry Honors or Algebra IB Honors, if they're not as strong. And the Algebra IA kids will most likely filter into Algebra IB CP which is the second year of Algebra I. If they did really well, they could be recommended for Algebra IB Honors. In Grade 10, they have five different options, depending on how kids are doing. It's similar in Grade 11 then in Grade 12 there are a few more options.

Transcriber's Note: At 4:36 p.m., Superintendent Malone entered the meeting.

Dr. Costar had asked for this item to be on the agenda because he had read an article that expressed his concerns. One of his concerns was some of the data that he had seen indicated there was a lag in 8th grade math scores and a stagnancy in high school math scores in the first year. It seemed like students were taking some form of Algebra I. What concerned him, from a developmental standpoint, was that some students were not ready for the abstract concepts that appear in Algebra I. There is some research that suggests that educators are doing more harm than good if they try to force concepts on students who are not developmentally ready for them. This could turn them off to math and be the reason why they are having difficulty with math. Based on the scores that he saw, he wondered if they were offering Algebra I too soon in the 8th grade and he also wondered what they were doing with the kids in the 9th grade who were having trouble understanding the concepts of Algebra I. He understands that they

have standards that the state requires them to follow and they have to match what they teach to those standards. Students aren't sure what math class they should be taking when going from 8th grade to 9th grade. Sometimes they would get input from the 8th grade teachers but mostly it was a guess. When he looks at what is being offered in the high school, it seems that there are fewer offerings based on what a child is able or not able to do. He wondered if there was a way that they can assess students before they go into Algebra I so that they can determine their readiness.

Principal Patterson explained how they determine where students were going in for 9th grade. What they did through the Algebra team was develop a criteria where they have a spreadsheet that's based on benchmarks, homework, and teacher input and they do this for every student that they select. They also developed a sheet where they communicated with Ms. Clements at the high school, and she would ask if there were students who needed intervention in the course that was selected for them.

Dr. Costar said that it looked like the only option for students was Algebra IB and IH. They all take Algebra. He asked what the difference was between IB and IH. Mrs. Panchley clarified that they're both IB but one of them is honors and the other one is college prep. Dr. Costar asked if the lowest level was Algebra I College Prep. It was confirmed that it was. Dr. Costar asked Principal Patterson if all 8th graders were ready for Algebra I College Prep. Principal Patterson answered that they were but with support of an interventionist. Mr. Coogan asked if that is what they are getting at the high school. Mrs. Panchley asked Ms. Clements if she could explain what Algebra Essentials Grade 9 Intervention was. Ms. Clements explained that what Mr. Woodward had created was a math intervention spreadsheet and, on that spreadsheet, they were looking at 7th grade MCAS data because they didn't have the 8th grade MCAS data yet. They looked at kids for a range of scores, at the high failure/needs improvement students and those were the kids that got sent back to the middle school teachers to get some comments around the student as to whether or not the student would take advantage of the intervention. They identified about 40 students who were in an Algebra Essentials course. It is not a class. It's a small group, tutoring opportunity for students within their schedule.

Dr. Costar asked if they also have math intervention in the 8th grade. Principal Patterson confirmed that they do. Mr. Coogan asked if he understood that they had 40 kids who came from middle school who flunked middle school math or was there more than 40. Mr. Woodward explained that there were currently 40 students and there will be additional students next semester. They put any student who scored a 222, which is on the border of passing MCAS, in Algebra Essentials. They also included the final grade for 8th grade math and attendance and a note from the students' 8th grade teachers to find out how they are doing in math and if they felt that the students needed additional intervention. Mr. Coogan asked if it was a combination of the total of MCAS scores in math and failing 8th grade math. Ms. Bronhard said that failing 8th grade math was not a part of the equation. If kids failed 8th grade math, they would have to go to summer school. There are kids who may have failed 8th grade math but are still proficient or advanced on MCAS scores. There were students who received John and Abigail Adams Scholarship Awards who may not have been passing math all four years successfully. It's not just tied to MCAS scores nor their grade. They're trying to look across to take a full assessment of the student to find out why they're struggling.

Dr. Costar said that it was very confusing that students were not passing math but they were passing math on the MCAS. He doesn't feel that a lot of 13 and 14 year olds were ready for Algebra I but they're in Algebra I and they're struggling with it until something clicks. What usually clicks is their ability to

think abstractly. He wondered if there was a way to look at their readiness to be able to manage abstract thought and handle algebraic concepts as they enter into 8th grade.

Principal Pontes said that, coming from an elementary school and middle school background, one of the things that she sees with math classes is that they're teaching conceptual math at the elementary and middle school grades but when they get in the high school, math is taught very differently. She said that kids are passing math at the elementary and middle school levels on the MCAS but they hit a brick wall when they enter high school. Dr. Costar asked if they were hitting a brick wall because they're not developmentally ready or because it's being taught differently. He asked if the high school and middle school teachers coordinated to see what was happening. Ms. Clements said that she and Mr. Sakell have spent a couple of Saturdays together with a group of 8th and 9th grade teachers developing a functions unit.

Mr. Sakell said that they were looking at what was the toughest unit for kids in the 8th grade. Eighth grade teachers across the district got together then met with 9th grade teachers at the high school and started looking at the 8th grade and the 9th grade curriculum map and resources that were used to teach concepts. There were some differences in the resources that were used. It made sense to him because he used to work at the high school but, if he ever went back to the high school, he wouldn't teach the same way that he did back then because he sees the tools that were used in elementary and middle school. When he was at the high school, he didn't know about those tools. As they are making the connections and sharing resources and creating curriculum maps so that the high school teachers can see the things middle school teachers are using, like the ratio tables and the linking sheets, and when those practices carried over then the information becomes more accessible.

Dr. Costar asked if there was a shift from the more concrete parts of algebra to the more abstract parts of algebra. If the 8th grader could not understand word problems, they were not abstract thinkers. They could handle concrete problems but, once they had to start thinking abstractly, they had trouble.

Mr. Sakell said that, when he used to teach at the high school, most of it was operational. Now, at the middle school, they approach every unit with word problems. They just started the functions unit in the 8th grade. They made a commitment to themselves and the students that they wouldn't present a problem that didn't have context.

Dr. Costar asked if kids struggle with that in the 8th grade. Mr. Sakell said that they do but, in the classrooms, they're doing small group pull outs for the kids who are struggling. In the 7th grade, they have a group of teachers where that is part of the goal to see how far kids have come with word problems. Nothing is presented unless it has a context, otherwise it made no sense to the kid.

Ms. Clements said that she has been at the high school for 12 years but worked at an elementary school for one year and that gave her a global view of education. They are trying to implement things through the geometry curriculum, Quick Checks, which is constant 10-15 minutes of review of fluency of middle school skills like order of operations, for example. They are also working on building some more engaging, motivating units. There are students who like the math but there are other students who like to see concrete examples of math. They also have a very young math department at the high school. They've had professional development with the functions unit and high school teachers were saying that middle school teachers were using terms they've never heard before. Ms. Clements has heard these terms because of the one year she worked at the elementary school level. They need to build their capacity in the math department at the high school so that they can really understand where these kids are coming

from. They're getting there but they're very young. The majority of the math department are teachers right out of college and it's their 1st, 2nd, or 3rd year teaching.

Ms. Bronhard added that they have not had a leader in the math department for a few years. That has been the most transient department at Durfee. There was a 33% increase in math teachers returning. They had 15 in 2015-2016 and they had 20 returning last year. They had 13 new hires last school year through September, October, and November. They were not fully staffed in geometry last year until roughly November. Kids were taking tests 3-4 months later. It's not a clear depiction of where Durfee is in math or where they're headed. Ms. Clements has been doing a good job and math teachers are taking her seriously as a leader and believing in the direction of where they are going. Teachers were wary about the Quick Checks and giving control of their class curriculum to do the Quick Checks.

Dr. Costar said that his prime concern is that students be assessed so that they can be taught according to where they're at so they can move to the next block before they get frustrated and get turned off to math. There are students who are ready to take off but there are many more who are not ready.

Principal Pontes said that is what good tiered instruction should look like. She agrees with Dr. Costar. She added that if they had a strong tiered model then they're going to have a strong Tier I, which is whole group, and a strong Tier II, where the student is going to receive additional support.

Dr. Costar feels that middle school students should be evaluated at the end of 6th grade or the beginning of 7th grade so that they can meet their needs before they go into 8th grade. Once they're in 8th grade, middle school teachers should coordinate with the high school so that they can meet the needs of the students and decide where they belong in 9th grade. He knows that MCAS is mostly an algebra test and geometry is sophomore year but it used to be a junior year course. For colleges, they used to require Algebra I, Algebra II, and plain Geometry but there are some kids who are not ready and they would take Pre-Algebra freshmen year. For some students, it does damage if teachers push them before they're ready.

Mr. Woodward expressed that one of their goals and priorities was to vertically align, not only with the middle schools, but with the colleges to meet their expectations so that all of their students were college and career ready. They are trying to build curriculum that sets students up to take college-level math, instead of remedial math. There's a lot of statistics out there that show that under 10% of students who start at remedial or developmental math courses end up persisting in college. Ninety percent are dropping out. Dr. Costar agrees that kids in college are mathematically challenged. He teaches freshmen Psychology 101. Students know the mode, median, and mean but they couldn't do a formula. They didn't know how to reduce a fraction.

Mrs. Panchley asked if they could go back to the Algebra Essentials because she'd like to hear more about it. She understands how they identify the students but asked what it was. She knows that there are five periods in a day but asked if the Algebra Essentials was one period a day or two periods a week. Ms. Clements answered that it was every other day. Mrs. Panchley asked if they transition in and out at the end of the term. Ms. Clements explained that this was the first year of this model so they're going to run this through for Semester 1. They do have the Term 1 grades and about 80% of the 40 students passed Algebra I for Term 1. She passed out a handout that showed different types of interventions they worked towards this year in response to the MCAS data. Eighty-six percent of Algebra Essentials

students that were enrolled in Algebra I passed for the term while 64% of students who were not enrolled in Algebra Essentials passed Algebra I for the term. That's something that they would like to grow. Before the end of Term 2, they need to reassess to see who the students are. There are students in Algebra Essentials who truly took advantage of it. The other thing that has been really positive is their two courses in ELL math. These are newcomers or students who have had tremendous gaps in their education.

Mr. Woodward explained that these were students who have been in the country for less than a year. Based on the MCAS data and research they did on best practices supporting ELL students, they found that a Newcomer Model was the best way to support those students to help them to get those language acquisition skills so that they could thrive with the mathematical content. They created a Newcomer Academy so that students can transition into the US Education Model and, when they're ready, they cycle kids out into the college prep classes where language is where it needs to be.

Ms. Clements said that that is up about 40 students right now. The two teachers who are teaching those classes are focusing on Algebra I standards because all of the students needed to take the MCAS. Fifty-one percent of Newcomer ELLs passed math last year and 90% of Newcomer ELLs passed math in Term 1.

Ms. Bronhard added that Algebra Essentials is being covered as a "duty period." They do not have a full-time interventionist. This would be an ideal position for them. Right now, this is voluntary for teachers as a part of their duty period. Dr. Costar asked when they identify students who need math intervention. Ms. Bronhard answered that they do that over the summer. Ms. Clements added that they also get information from middle school teachers at the end of the year. Dr. Costar asked if algebra and college prep were a one-year course. It was confirmed that they were. Dr. Costar asked what would happen at the half year if half the students were failing. Ms. Bronhard answered that they started a grade recovery program which was super successful because it really served the kids that had failed or earned DF, FD, or FF combination grades in Term 1 and Term 2. They gave teachers stipends for after-school work. Kids would stay after for one or two days for a 3-5 model and really dug in on those gaps and skills that kids were not successful with for the first semester. So they're filling the gaps for first semester while they're maintaining their Algebra I class.

Dr. Costar said that one of the things that was really successful a long time ago but wasn't continued was, at the half-year mark, the Algebra I teachers would get together and talk about which kids were making it and which kids were not making it. They decided amongst themselves that the kids who were not making it were going to go into a new section. The kids who were making it would continue on. The teachers volunteered to teach those kids who were not making it. It was like stretching Algebra I. Principal Pontes asked when they made up the half year. Mrs. Panchley answered that, as she remembered it, it was Intro to Algebra I and Intro to Algebra II. They had two years to do Algebra I.

Ms. Bronhard said that they are doing that now but they're doing that in 8th and 9th grade. Some of the grade recovery work had served that same report and the Algebra Essentials is also offering some of that support. They would like to offer Algebra Essentials to sophomore students for kids who need more support. They don't have the staffing right now to accommodate that. Ms. Clements explained that not all teachers have Algebra Essentials as their duty period. Some teachers actually push in once or twice a week in another teacher's classroom so that allows that lead teacher to plan for a small group session.

She identified all the students who were taking the retest and rearranged teachers' duties and had them pull out certain students from class who haven't passed the MCAS yet and had them work on MCAS prep. They would like to continue to do that.

Principal Pontes feels that they are using the duty period much more effectively this year than they did last year. Mrs. Panchley argued that if there were more periods then they wouldn't need to hire more teachers. Principal Pontes said that they are starting that conversation at the school level. Mrs. Panchley said that, in respect to the schedule, there are kids who, for half a year, take Pre-Calculus, then for the other half of the year, they go into AP Calculus. That doesn't seem like a good model to her for success on the AP exam. Ms. Clements said that AP teachers were already talking about ways to support those students. Principal Pontes explained that, after Year 1, they made some adjustments to the schedule using feedback that students and staff provided. This is a pilot year. They have a schedule and a committee set up to assess its effectiveness and they do need to address the issues.

Dr. Costar said that some of the most important staff development is math teachers getting together every so many weeks to figure out what is working and what isn't. Ms. Clements said that they do that weekly. Mr. Sakell added that they have a program called i-Ready in the 8th grade. One of the things that it does is it gives a diagnostic to a kid at the beginning of the year and it grades them and puts them at a level on four strands. One of them happens to be numbers sense. The other happens to be algebraic thinking. Starting the second half of the year, they gave the diagnostic to the kids and he cross referenced all the kids who scored low on algebraic thinking and number sense with MCAS scores. What they're doing for the second half of the year is creating Math Lab, like an intervention, but it's tailored toward number sense and algebraic thinking. What it's going to do is, at the end of the year, they will give them another diagnostic that falls into that category. He'll be able to take all the data on those kids and send it over to the high school and say here's where those kids ended on their diagnostic with number sense and algebraic thinking. That's one way that they're helping at the middle school. Dr. Costar asked if they were doing this at all the middle schools. Principal Patterson confirmed that they were doing this at Morton.

Mr. Sakell said that the other thing that they are doing is, they have one math period a week where they do the i-Ready program in the classroom. It takes the diagnostic and shows that the students are at a certain level and they are given math problems that are at that level. The teacher's role is to pull a group of kids into a small group to determine which students need specific help.

Principal Patterson wanted to go back to the subject of sharing practices. She explained that, for the middle school, they met weekly by grade level. They also met once a month, if not more, to share vertical practices. They're trying to make sure that the 8th grade teachers understood those conceptual models needed to be brought forward into 8th grade.

Mr. Coogan said that he was much more practical. He saw the staff retention as a plus but was having trouble getting passed the 40 kids who had to take another math class during the day. He was not sure if that was helpful.

Principal Pontes said that their goal was to reduce that number. She clarified that they are not doubling up on classes for those kids. Algebra Essentials is like getting small group tutoring from math teachers. It's not an additional class. Mr. Coogan said that he thought it was an additional class that they were

getting every other day. Ms. Clements clarified that they're bringing in their work from their math class. Principal Pontes explained that they're getting tutoring every other day. She reiterated that 86% of the kids who were in Algebra Essentials were now passing their math class. They're getting support in real time.

Mrs. Panchley asked for further explanation of what Algebra Essentials was because she thought she understood it but now she's wondering if she misunderstood. Ms. Clements explained that a student would have their Algebra I class during Period 2 with a teacher then Period 5 Red they would go to a classroom where there is a math teacher in the room. Because it's a duty, that teacher is not responsible for lesson planning. It's a time for students to get help on their homework. It's also a time to get support with test review. Some students might come in and say that they don't have any work to do but there are other resources in the classroom where students can practice math. This is not an additional class that they're getting graded for.

Mr. Coogan asked how many kids were in the classroom at once. Mr. Woodward answered that the highest was about 10 or 12 but the average was about six or seven. It was a very small group.

Dr. Costar asked what the math requirement was for graduation. Mr. Woodward answered four years. The test that students take in college is the Accuplacer test which expects students to have a good grasp of Algebra II and a little trigonometry as well to test into college-level math. Otherwise, they go into developmental courses which they don't get college credit for.

Dr. Costar asked what colleges wanted students to have other than Algebra I, plain Geometry, and Algebra II. Mr. Woodward said that it depended on the college. Most four-year colleges want four years of high school math with Algebra I as the lowest math they will count. Dr. Costar asked if it was creating a gap if they're giving math to kids so that they could feel successful at it but then they tell them that they still need to pass Algebra I. He wondered if it was worse to put them in a class for a year where they struggle and have them get turned off to math. Principal Pontes said that what they needed to do was figure out how to support those students and close that gap without depriving them. The fear is that they are going to deprive students. They're trying to figure out the right answer and the right way to support students. From K-12, they need to have good instruction so that their numbers decrease. They're never going to have 100% of students 100% of the time but they should not have high percentages at any grade level. The only way they're going to reduce those numbers is to have strong, effective tiered instruction so when students are getting to whatever grade they are going to, most of the students have access to whatever math they're offering.

Principal Patterson said that the Algebra IA that's offered at the middle school is all based on Common Core 8th grade standards. The algebra is embedded in there but they're not doing high school algebra. If they get rid of that course, students won't have access to Common Core curriculum.

Ms. Bronhard said that she has been working with Mr. Sakell because there are two 8th grade students who are doing really well in math and should be in high school level math. Ms. Bronhard met with the parents of the students and put a plan together and had the kids transported to Durfee to take first period math.

Mr. Sakell teaches part time at BCC and noticed that the need for remedial classes has grown. There are three remedial classes at BCC. The one with the highest dropout rate is the lowest one. When you get them in that first remedial level, they feel so lost. He's lucky if he can keep 50% of those students.

Principal Pontes said that there are many factors that contribute to the data at the high school level. It's very hard for them to point to one thing that's contributing to that data because there are many different variables. Right now, they feel like they have better supports in place for their teachers and better supports in place for kids.

Mrs. Panchley said that Superintendent Malone was going to provide some information as far as what other districts had and asked if he was prepared to speak on that this evening. Superintendent Malone said that he did a very quick question to his ListServ this week and received 12 responses. He said that semantics and titles were interesting. In this district, they call it Algebra I in 8th grade but really it's grade-level math. Grade-level math, being what the standards say, there's a blending that happens between 8th and 9th grade. Every district that he talked to with high schools with more than 1600 students, the feedback that he got was that pretty much everyone is at three levels. The lowest level is college prep, except in Brockton, they have a non-level course but that is only for non-diploma bound students. He looked at Andover, Bridgewater, Brockton, Dartmouth, Everett, Haverhill, Plymouth, Shrewsbury, Springfield, Tewksbury, and Worcester. None of these districts has gone less than grade-level math which is Algebra I. When he was at Swampscott, they had six levels of math but only 800 kids. They're at three levels now. What happened years ago in the inner cities, the Algebra Project came out of Cambridge and it became a racial connotation that if you weren't in Algebra I by 8th grade, you were doing a disservice to kids of color. Common Core changed that standard. Most of the systems that made the trajectory switch use the term "integrated" but all of it is college prep. The lowest track is known as college prep. What they found in the conversations across the Commonwealth is that, if they didn't push the kids to be able to be exposed to all of the content, they would do them a disservice. He suggested that they continue to have this conversation and continue to track data. His goal is, in four years, if they don't have increases in math results, he doesn't want his contract renewed. That's how serious he is about this. Mrs. Panchley agrees that it's a conversation they should continue. She said, in looking at the handouts, it looks like Algebra I is the minimum of where they should be starting. Dr. Costar said that he asked for this to be on the agenda because he was concerned with developmental readiness to handle algebra and if they're looking at what kids are able to do developmentally. He heard some things at this meeting that tells him that they are looking at this.

Transcriber's Note: At 5:51 p.m., Superintendent Malone left the meeting. At 5:53 p.m., Mr. Sakell left the meeting.

2. **Discussion:** Benchmark Data

Dr. Roy handed out K-8 benchmark data in ELA and mathematics. It's based on Term 1. Ms. Clements had the high school math data and Dr. Roy had the ELA data. There were 12 indicators if you count grade-level ELA and math. The results showed that Spencer Borden improved on all 12 indicators. Mrs. Panchley asked what happens after they get this information. Principal Patterson said as soon as they get into test scores and start looking at the data, what they do is start looking at item analysis. They start to go question by question in a team of teachers by grade level. Then they start to determine where students might have had difficulties. Then they start grouping them in concepts and they determine how

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they might re-teach and some of that they've already done. For the 8th grade geometry unit, they found two particular areas that they needed to go back and do the re-teaching with. They decide the lesson as a team then they reassess and see if there is growth. They do that every grade level every time they get the benchmark data.

Ms. Clements said that most of the benchmarks had been previously created. Most of the content was around standards that were going to be assessed. Last year, 26% of students got between 41-50% correct. They spent a lot of time at the end of last year creating what they really want to know about their students before they come in. They gave these assessments around the first or second week of school.

Mrs. Panchley observed that it seemed like Talbot and Henry Lord were struggling a little more. She asked if they were aligning vertically with Durfee. Mr. Woodward said that information came from all the schools but more of the students in Algebra Essentials came from Talbot. Ms. Clements said that she met with Mr. Sakell and Principal Patterson two or three times. She also met with Brandon Strickland at Talbot and with some of the math teachers but it seemed like she met more with Mr. Sakell and Principal Patterson last year.

Mrs. Panchley said that, maybe after the second term, they can have another meeting and review data from Term 2 to see where they were at.

MOTION: Mr. Coogan-Dr. Costar: To adjourn.

No discussion

All were in favor

None were opposed

Motion passed (6:03 p.m.)

Respectfully submitted,



Administrative Assistant

ADA Coordinator: Gary P. Howayeck, Esq.- 508.324.2650

Please note: A videotape/DVD of this meeting is on file in the School Committee Office and is available for review by contacting the Administrative Assistant for the School Committee Services