BELLINGHAM SCHOOL DISTRICT
Bellingham, Washington

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MEMORANDUM

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TO: **Board of Directors**

FROM: **Dr. Greg Baker, Superintendent**

DATE: **February 3, 2021**

SUBJECT: **Ends Monitoring Report 2.1, Part 1**

I am pleased to submit this Ends monitoring report (End 2.1 - Student Competence, Part 1) to the school district's board of directors. This first of two reports in Ends 2.1 typically focuses on student testing performance in English language arts, math, and science, and compares our students' test performance to comparable and higher-performing districts. Because of the suspension of state testing in the spring of the 2019-20 school year, we do not have the usual means to assess progress in student achievement over time in comparison with peer districts. As a result, we have taken a different tack with this report the details of which are included in the introductory section below. The remaining Ends reports for this school year will be presented on the following schedule:

- Ends 2.1, Part 2 will be presented at the March 10, 2021 board meeting and will focus on graduation rates, and students' participation in post-secondary education and career preparation in comparison with peer districts. We plan to combine indicators 3 and 4 from the policy, whereas typically these have been split apart and written as two separate parts of the sequence of Ends 2.1 reports.
- Ends 1, 2 and 3 which focuses on evaluating the vision, mission and all seventeen outcomes in the Bellingham Promise will be presented at the May 12, 2021 board meeting.

Introduction

In any typical year, this report would focus on our district's student achievement performance and growth levels overall on the Smarter Balanced Assessment (SBA) and compare our progress to selected peer districts. Ends 2.1, as written, relies on big picture comparisons to a peer districts that are selected based on being demographically like Bellingham. Because of the suspension of state testing in the spring of the 2019-20 school year, we do not have the ability to compare our district's student achievement and growth with that of the groups of peer districts we typically reference.

That said, we endeavor below to tell an interesting and revealing internal district story about student achievement and growth using other measures. In the paragraphs that follow, we present an internal accounting of student progress and growth using measures that were available for

Bellingham students since we last reported to the board. We begin with an analysis of the Measures of Academic Progress (MAP) data, comparing student performance and growth in year-to-year comparisons. We include a brief snapshot of data we have collected from student work in two new software program solutions implemented as a response to the pandemic. We close by revisiting elements of work done in service of the mathematics trends we reported on last year.

By way of reminder, the board revised the Ends 2.1 policy language in June of 2018. Language included in the revision focuses us on comparing progress to districts that are demographically like Bellingham, as well as to districts whose students typically outperform our students on the standardized test. The Ends 2.1 policy language follows:

E - 2.1: Consistent with the district Vision and Mission, all children of the Bellingham Public Schools community will attain high academic achievement, develop essential skills and attributes necessary for continuous growth in learning, and graduate from high school. All students will succeed and grow regardless of ethnicity, socio-economic status, English language proficiency or disabilities.

1. Every students' achievement, skills and attributes will show continuous significant growth, and measures will exceed the Washington state benchmarks and be high performing relative to similar students in demographically comparable districts, as measured by state assessments and other available data, as appropriate.
2. Gaps in achievement, skills and attributes between groups of students will close. For state or federally identified student populations, any gap in achievement will be eliminated, and annual achievement will be greater than that of similar students in demographically comparable districts.
3. Every student will make continuous advancement toward graduation. Measures of on-time and extended graduation attainment will be high performing relative to similar students in demographically comparable districts.
4. After graduation, student participation in post-secondary education and career preparation shall increase and exceed participation in comparable high-performing districts.

While being held accountable to our demographically comparable districts, we also continue to compare our progress to other district, state and national data that offer a more comprehensive view of student competence.

In this Part 1 report, we focus on numbers 1-2 above. As noted earlier, in our Ends 2.1 Part 2 report presented next month, we focus on indicators 3-4.

About MAP Testing

MAP Growth assessments are computer-adaptive tests from Northwest Evaluation Association (NWEA) that our students take to measure academic knowledge, skills and abilities in reading and mathematics. The test scores tell us about student proficiency related to state standards, national percentiles, and growth over time. These tests are not used for accountability but to augment classroom assessment, provide benchmarks of student progress, and inform instructional programs. NWEA's national norms study provide status and growth norms for students based on grade level samples comprising of 72,000 to 153,000 student test records from approximately 1000 schools. These samples were drawn randomly from test record pools of up to 10.2 million students attending more than 23,500 public schools spread across 6,000 districts

in 49 states. Rigorous procedures were used to ensure that the norms were representative of the U.S. school-age population.

All students in grades 3-8 take MAP reading and math tests in fall unless their individual education plan (IEP) indicates an alternate assessment. The tests are also available in winter and in spring, though in the spring most students only take the required state tests. Note that math data for grades 6-8 in fall 2018 was withheld since not enough students took the test to be representative of the entire grade level.

BPS MAP Growth Assessment Overall by Grade Level

Our first exploration of the MAP data compares the reading and mathematics percentile averages by grade level based on the NWEA national norm study. A score at the 50th percentile would mean that students scored exactly on the mean of all scores nationally. Page 1-2 of the data appendix contain the charts relating to our analysis of the MAP growth assessment. Charts A1 and A2 display the reading and math percentile averages for each of the last three fall MAP assessments. Both subject areas show a slight increase in overall in percentile average score from Fall of 2019 to Fall of 2020. (Note: We tested a smaller number of middle school students in math in the fall of 2018, which is why those columns are missing in Chart A2.) Percentile ranks in reading were up slightly this fall compared to the prior years in grades 3, 4, 5 and 7, and down slightly in grades 6 and 8. Math percentile scores were up slightly in every grade level except grade 8, which did not change in year-over-year comparisons.

Fall MAP scores can also be used to project how students will do on the Smarter Balanced state test in the spring. Charts A3 and A4 show the projected proficiency levels in the spring in reading and math, respectively. Reading projections held steady for this year, compared with the two prior years. Math projections appeared to drop slightly, which is consistent with the recent national findings from NWEA. Charts A5 and A6 expand the fall 2020 data to show grade-by-grade projected proficiency levels, based on the fall of 2020 assessment. Students at levels 3 and 4 are projected to be at or above standard in the subject area by spring of 2021. This means, for example, that in reading, 33 percent of third graders are projected to be above standard, and 21 percent at standard by this spring. In math, 15 percent of third graders are projected to be above standard, and 33 percent at standard by this spring. The eyeball test shows that, not unlike trends we have observed over the past few years in the SBA data, projected proficiency levels in math lag behind those in reading.

BPS MAP Growth Assessment by Student Groups

We also analyzed this data for the four major student subgroups we follow in our typical annual analyses. Page 3 of the data set displays the reading and math percentile scores for students who are eligible for free/reduced-price meals, students who are identified for English language learners (ELL) services, students with an IEP, and students who are Hispanic, compared with their White peers. Chart B1 shows the fall 2019 data in reading for these groups; Chart B3 displays the same data for 2020. We noted that in this year-over-year comparison, all four subgroups scored at a slightly higher percentage on the fall 2020 test. For example, students with an IEP scored at the 33rd percentile in 2019, and at the 38th percentile in 2020. Hispanic students scored at the 41st percentile in 2019 and 44th in 2020. A similar trend was noted in mathematics. Charts B2 and B4 display the percentile averages in math for 2019 and 2020,

respectively, by student sub-group. Students receiving free/reduced price meals scored at the 37th percentile in both years, while all other subgroups showed a slight increase in percentile score in year-over-year comparison. While all subgroups scored well-below the mean 50th percentile, we were heartened to see that there was not a precipitous drop in scores during the pandemic. Rather we saw a slight increase in percentile scores across the board for students in reading and for most subgroups in math when comparing 2020 to 2019.

BPS Change in MAP Test Score Quintiles from Fall to Fall by Grade Level

In addition to looking at overall percentile scores, and comparisons with prior years, we were also interested to assess the distribution of students tested in each grade level by their relative shift in test percentile from the previous fall. The charts on page 4 show the percentage of maintainers (students whose test scores stayed within the same quintile range), gainers (students whose test scores increased one or more quintiles) and sliders (student whose test scores decreased one or more quintiles. Charts C1 and C2 show these changes for the period of fall 2018 to fall 2019; Charts C3 and C4 display the changes for the period from fall 2019 to fall of 2020. Comparing Charts C1 and C3, we can see that the overall percent of students who gained or maintained their test percentile levels remained relatively constant, with most grade levels showing a slight decrease in students "sliding" during the current year. We also viewed this data point as relatively good news; kids do not seem to be losing ground because of the pandemic in year-over-year comparisons in reading. A similar trend was noted in math, comparing Charts C2 and C4. Recall we had a smaller sample of middle level math MAP data in the fall of 2018, so only can display the data for grades four, five and six. However, at those grade levels a higher percentage of students fell into the "gainer" category in the 2019 to 2020 comparison than in the prior year. The percentage of students "sliding" also decreased slightly in grades five and six, and these levels were notably lower in grades seven and eight.

BPS Change in MAP Test Score Quintiles from Fall to Fall by Student Groups

Similar to our analysis of the overall percentile averages, we also examined the test score quintiles of "gainers," "maintainers" and "sliders" for students from our four identified subgroups over the past two years. Charts D1 and D2 on page 5 of the data set compare the changes in reading and math test performance for our four student subgroups during the period from fall of 2018 to fall of 2019. Page 6, Charts E1 and E2 show the same analysis for the most recent year, fall of 2019 to fall of 2020. Interestingly, and perhaps counter-intuitively given what we might have expected given COVID, we found lower percentages of students in the "slider" category (students whose test scores decreased one or more quintiles) in the current year than in the prior year. Moreover, students in the identified subgroups appeared in many cases to be "gainers" at a similar or higher rate than their comparison group peers in the 2019-2020 comparison. For example, on page 6, Chart E1 shows that 34 percent of students served in the ELL program were "gainers" in the year-over-year comparisons; this compared to only 27 percent of non-ELL students who were "gainers" during the same period. Similarly, on page 6, Chart E2 displays math test change in performance, revealing that 12 percent of students with an IEP were "sliders" during the 2019-20 period, compared with 24 percent of non-IEP peers.

DreamBox and Lexia Comparisons

As it became clear that we would begin the 2020-21 school year still in remote mode, we looked for tools that would help teachers learn about what their students know and are able to do, as well as supporting their continued learning at home and in child-care centers. Lexia for literacy and DreamBox for mathematics are supplemental tools (not to replace core curriculum) that we are using this year to help fill those needs in remote and hybrid models. A brief description of each follows:

DreamBox is an adaptive technology solution that provides the right next lesson for each student. It personalizes instruction as a supplement to core instruction. The highly engaging, game environment has manipulatives and other resources to help students make sense of math concepts. It is different from other online math programs as it is not an online worksheet. The program has rich visuals and includes both Spanish and English. Much more than developing procedural knowledge, DreamBox captures gaps in understanding and helps provide support so that students develop deeper understanding of math concepts. Students are encouraged to play in DreamBox regularly and to complete more than five lessons each week.

Lexia is a supplemental resource for Tier 1 literacy instruction provided for the 2020-21 school year to support and reinforce instruction in remote and hybrid learning. After teachers teach students how to use the program, it is intended for them to do mostly independently during asynchronous learning time. This program is a great support for home learning and child-care because students can do it at times when they are not meeting with their teachers.

DreamBox tracks where students are in terms of predicted end of year performance in mathematics at each grade level. Since our district just began to use DreamBox with the advent of the pandemic, and primarily as a means of additional support, we take caution in putting too much stock in outcomes from the data at this early point. That said, there appear to be some promising trends emerging. DreamBox data gathered at the end of the month of January 2021 (see page 7, Chart F1 of data appendix) revealed at third, fourth and fifth grade levels a high majority of students are predicted to be on track for this year. 77 percent of third graders, 80 percent of fourth graders, and 69 percent of fifth graders appear to be on track to meet standard; another 13-16 percent at each grade level are what DreamBox refers to as "potentially" on track to meet or exceed standard.

Lexia tracks students' progress in literacy and compares the percentage of students working in grade level material over time. Lexia considers the measure of "working in grade level material" as a sort of proxy for student accomplishment toward standards. What we hope to see in this kind of data report is that as time progresses, more students are working on material that is at or above grade level. The chart F2 on page 7 of the data appendix shows current vs. starting levels of student performance working at grade level. In each grade, K-5, the data show evidence of increasing percentages of student working on material that is on or above grade level, while the percentage of students working on material considered "below grade level" is decreasing. Again, we see this as a positive sign, with the caveat that, like DreamBox, our experience with Lexia is new, and therefore important to view these trends as preliminary during this first year of use.

While we are early in our usage of these two recent programs, the fact that they generate data in real-time has been a boon for assessing student progress in the areas of math and literacy. So, while not "tried and true" in the same way as the MAP test, we included this little additional bit

of data analysis because it both reflects our efforts to support teaching and learning in the time of COVID and gives another window into student progress.

Revisiting Math Concerns and Progress

Last year, at our January 29, 2020 school board meeting at Options High School, board members reviewed the Ends 2.1 initial report and heard us expressing both concern about a continued decline in math achievement as measured by the SBA, and commitment to ensure that those trends could and would be reversed through redoubling our efforts. Specifically, we noted in that 1/29/20 report,

> *"SBA math scores have declined in some grade levels over the past four to five years. We see this not as a "blip" or an aberration on the radar at this point; rather, scores are trending down in year-over-year comparisons. While the concerns are mitigated by the fact that it continues to appear that our students' math achievement improves as they progress through our system, district leaders have been working this past year to explore the root causes of the decline in the scores we are seeing, particularly in the elementary grades."*

Fast forward one year, and while we do not have the SBA data available to look at the comparisons this year, we have some indication from the data analyses presented above where our student achievement and growth in math compares with that of prior years, including some positive indicators and some that create further questions.

To keep the math improvement focus on the front burner, we wanted as well to share a few of the steps that have been taken since we last reported on student achievement and growth in mathematics. These fall into a description of the "means" rather than the "ends," and so as such technically sit outside of the intended purview of this report. However, given the unusual time we find ourselves in, we felt the board might benefit from knowing a bit more detail about the steps we have taken since we last reported. We continue to believe these steps hold promise for the future.

Over the past several months, we have been engaged in inquiry to better understand aspects of leadership (including our own), teacher practices, students' experiences, curriculum/instructional materials, professional learning, and other conditions that support high quality math instruction. The work has spanned from targeted professional learning for members of the leadership team, all the way to a focus on selected individual classroom teachers and small groups of students they identified for purposes of increasing math understanding at one grade level in one of our elementary schools. Efforts include:

- Participation of elementary principals and teacher leaders in elementary math learning walks in classrooms facilitated by the University of Washington Center for Educational Leadership (UWCEL) at three elementary schools to gather observational data and to sharpen our lenses for identifying elements of high-quality lessons and high leverage teacher practices in mathematics instruction
- A two-day professional learning opportunity into PK-5 math for our educational technology coaches and math specialists to increase the system wide understanding of the math standards, effective instruction, and our instructional materials

- Team participation in a regional math leadership collaborative professional development series provided by the Northwest ESD (educational service district) and UWCEL
- Math and system leaders' engagement in a cycle of inquiry at Cordata Elementary with Director Charisse Berner, Principal Julie Van Wijk, Cordata's fifth-grade teachers, math specialist, and educational technology coach. This study focused on the math learning experience of several Latinx 5th grade students. The goal was to better understand their experience and to identify practices to improve learning experiences and opportunities for self-efficacy in math. We had begun to do short bursts of intervention with these students. This direct study was interrupted by the pandemic
- Hired additional math specialists support for Title I schools and expanded our use of math assessments
- During spring 2020 (through the creation of learning menus) and the 2020-21 school year, K-5 math instruction has been focused on essential standards using our adopted curriculum (Bridges in Math/Number Corner) through written guidance provided by our math TOSA (Teacher on Special Assignment) (with support from our Title I math specialists)
- During Fall 2020, we provided individual math manipulative kits for each student to be used at home during remote learning
- As discussed above, we purchased and implemented DreamBox, an effective elementary and middle school math software solution, for additional support during asynchronous instruction, intervention, and remote learning.

We look forward to the time when we will be able to circle back to our SBA data and determine the extent of the impact of these and other strategies that are in service of improving math learning.

Concluding Statement

We offer this Ends 2.1 Part 1 monitoring report, in combination with the remaining parts of the report that will follow, as evidence of a reasonable interpretation of Ends 2.1 that aligns with our vision, mission and outcomes, and is supported by data that demonstrates progress toward achievement of these Ends. We recognize that this year's report does not include the cross-district comparison data that is called for in the policy, but we have presented our analysis of internally available data as a proxy. Finally, we hope this report serves as a useful tool in support of the board's ability to regularly review our ends to ensure they remain relevant and inspire meaningful work throughout the organization and community.