Date: Jan 16, 2018

From: Adam Larsen, Assistant Superintendent

To: Board of Education

Cc: Thomas Mahoney, Superintendent

Re: Jan 2018 Board Report

Internet Speed Improvements

Over the break, we upgraded our Comcast Internet connection from 100Mb/s copper to 1000Mb/s ("gigabit" or "one gig") fiber. In our area, 100Mb connection speed is more often seen in homes and small businesses, rather than large institutions. Our new bandwidth capability is a tenfold increase. The previous bandwidth has served us well for the years we have had it, but as we look to increase the number of devices that depend on a connection to the Internet and also move more instructional materials to an online format, our demands for bandwidth are only going to increase. Neighboring districts with 1:1 initiatives, including Byron and Meridian, are on speeds that are similar to our new connection. During this migration, our phone lines were also upgraded from coaxial cable to fiber lines.

Comcast will soon be disconnecting the coaxial cable line in Oregon, as it is no longer needed. The Comcast fiber and the iFiber connection will give us redundancy in Internet access for Oregon. We will leave the Comcast coax connected at Mt. Morris to serve as a backup should we temporarily lost the connection between the two campuses. Without this backup service on the ready, DLR would have no Internet connection and no access to PowerSchool.

The change to a fiber connection has also improved our uptime guarantees. When entering into an agreement with a vendor, the contract typically includes a section known as a Service Level Agreement (SLA). These clauses provide guarantees on how much the service can be unavailable before penalties are incurred by the vendor. On the 100Mb copper connection, we had no Service Level Agreement.   On our new 1000Mb fiber, the SLA guarantees 99.9% uptime, with Comcast refunding up to 50% of our Monthly Recurring Charge (MRC) if there are outages totaling 24 hours or more in a month.

Length of Service Interruption:	Amount of Credit:
Less than 4 minutes	None
At least 4 minutes but less than 4 hours	5% of Total MRC
At least 4 hours but less than 8 hours	10% of Total MRC
At least 8 hours but less than 12 hours	20% of Total MRC
At least 12 hours but less than 16 hours	30% of Total MRC
At least 16 hours but less than 24 hours	40% of Total MRC
At least 24 hours or greater	50% of Total MRC

We believe that these improvements are some of the last changes that need to be made to prepare the technology infrastructure for student 1:1 devices. This has included increasing server capacity, replacing copper wiring with fiber, installing managed switches, hanging wireless access points in most classrooms and common areas, deploying a wireless management system, and rolling out teacher laptops. One remaining infrastructure improvement is deciding how and where students will charge devices. Power capacity may need to be added in classrooms, common areas, and offices to account for the increased demand to keep devices charged.

Score View

One of my favorite quotes having to do with measurement is known as Segal's Law. This adage states, "A man with a watch knows what time it is. A man with two watches is never sure." It is a great irony of testing that we often think that adding more sources of data will result in clearer pictures of student learning. This fails to come true time and again. Rather, introducing multiple sources of data almost always muddies the water and makes interpretation more difficult, at least to the naked eye.   When relying on multiple measures, one must employ statistical methods to blend the data together or to make predictions about future performance. If we were to rely solely on the assessment reports provided by test vendors and our gradebook, drawing conclusions about student learning would be nearly impossible.

Fortunately, we have the capability to develop integrated views that will pull data together from disparate sources. For certain types of data, we have been doing this for years using spreadsheets, and we have even used some statistics to make such predictions about high-stakes student outcomes. Our early warning systems, at-risk dashboards, and benchmark data meetings all function this way. What we had not done until recently was to merge periodic assessment data with live data from the gradebook. As we have moved toward using Common Formative Assessments (CFAs) in the Beyond Textbooks (BT) framework, it has become more important to compare data from those different sources and make instructional changes on the fly. This is one of the central tenets of BT—reviewing current learning data and adjusting to meet the needs of individual students.

The administrative team came to realize over the summer that both teachers and principals would need to view data in an integrated, barrier-free manner, as often as possible.   We wanted quick access to teachers and sections, a complete mapping of data sources to classes, color-coding to identify high and low scores, sorting, filtering, and a logical, chronological timeline of the assessments that were given. Once these requirements were laid out, the development of the project took most of the fall semester.

The project is called Score View, and it combines data from traditional grades, standards grades, Beyond Textbooks formative assessments, quarterly benchmarks, early academic screening data, NWEA MAP testing, and the SAT suite of assessments. At its core, Score View is a roster of students that can be created for any class section. At the top of the page, the teacher or administrator can enable or disable any data source. We speak of these data sources as "channels" that a user can "subscribe to" for a given section. When a source is enabled, scores from that assessment appear in the grid, and the appropriate color scheme is applied to each cell in the table.   The selected sources of data are remembered across sessions, so once a teacher has mapped a list of assessments to a class, those same assessments will appear by default the next time the section is loaded. This flexibility helped ensure that teachers have control over what sources they see, and it eliminated the need to build the course-to-assessment map ahead of the project's deployment.

By creating this more as a flexible framework, rather than a single-use data visualization, it has permitted us to add more sources of data to the list of options with very rapid turnaround. Once the principals were trained in the tool's features,

they quickly asked for more data to be loaded into the choices so they could view those alongside other scores. The teachers expressed the same sentiment. We obtained raw data files from the various assessment vendors, massaged them into the proper format, and imported them in PowerSchool so they could be queried out at will.

At present, the data sources are all centered on learning—grades, test performance, formative feedback, and assignment scores. It is unclear whether this will eventually converge with other projects that bring data together from multiple sources, such as the Amos Early Warning System.   What separates these two views currently is that the academic data are all criterion-referenced scores—what is a "good" or "bad" score is set ahead of time by aligning with desired learning outcomes, and students either do or do not meet the target. In Amos, all data points are norm-referenced—whether a score is "good" or "bad" has to do with a student's performance relative to his or her peers. Without a normative group, it's not apparent whether 85% attendance puts a student at-risk for failure. If the interventionist is aware that 85% is the third-worst attendance level in the entire freshman class, that places the student at risk. Because these projects take different approaches to highlighting and showcasing student performance, they may remain separate and continue to serve different functions in the data review cycles. As always, these ideas are in constant change and are adjusted to meet the needs of the constituents.

Some screenshots of the Score View project follow.

Respectfully Submitted,

Adam P. Larsen
Assistant Superintendent
Oregon CUSD #220

![OREGON CUSD220 logo]

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Score View

Teacher: ▉▉▉▉▉▉ Class: [17-18 6MA Mathematics 6 ▼] [PowerTeacher Pro]

[BT Formatives] [BT Quarterly] [MAP - Reading] [MAP - Mathematics] [MAP - Language Usage] [AIMSweb - Reading] [AIMSweb - Mathematics] [PARCC - ELA] [PARCC - Mathematics] [SAT EBRW]

[SAT MATH] [Grades] [Standards]

Key				
Does not yet meet expecatations	Partially meets expectations	Approaches expectations	Meets expectations	Exceeds expecatations

[▼]

| Student ▼ | | [ ] | [+] |

[Clear] [Apply]

22 of 22 items

Student ▲	09/08/2017	09/15/2017	10/13/2017	12/20/2017	01/10/2018
	AIMSweb - Mathematics M-CAP Fall	MAP - Mathematics RIT Fall	Q1 Grade	Q2 Grade	Q3 Grade
▉	7	216	A-	A	F
	29	225	A	A	A
	18	224	B-	A	A
	9	210	A	A	A
	11	205	C	F	B
	13	214	A	B	B+
	18	223	B+	A	A
	8	209	B	A	F
	9	213	A	C	--
					F
	AIMSweb - Mathematics M-CAP Fall	MAP - Mathematics RIT Fall	Q1 Grade	Q2 Grade	Q3 Grade

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[BT Formatives] [BT Quarterly] [MAP - Reading] [MAP - Mathematics] [MAP - Language Usage] [AIMSweb - Reading] [AIMSweb - Mathematics] [PARCC - ELA] [PARCC - Mathematics] [SAT EBRW] [SAT MATH] [Grades] [Standards]

Key

Does not yet meet expecations	Partially meets expecations	Approaches expecations	Meets expecations	Exceeds expecations

Student ▼ [_____]

[Clear] [A...]

20 of 20 items

Student ▲	08/25/2017 BTF 2.NBT.01 place value (OCUSD.M.2.NBT.01)	09/08/2017 BTF M.OA.03 odd even (OCUSD.M.2.OA.03)	09/08/2017 BTF M.NBT.03 number forms (OCUSD.M.2.NBT.03)	09/12/2017 MAP - Mathematics RIT Fall	09/15/2017 BTF G2.1M.C2.PO2A add w/or w/out regrouping, $ (OCUSD.M.2.MD.05)	09/22/2017 BTF 2. NBT.8 mentally add 10 or 100 (OCUSD.M.2.NBT.08)	09/22/2017 BTF 2. NBT.2 skip count (OCUSD.M.2.NBT.02)	10/27/2017 BTF 2.MD.8 (OCUSD.M.2.MD.08)	Student	11/07/2017 BTF G21MC2PO2B MD5 (OCUSD.M.2.MD.05)	11/13/2017 BTF 2G3 (OCUSD.M.2.G.03)	11/17/2017 BTF 2NBT4 (OCUSD.M.2.NBT.04)	12/08/201 BTF 2G1 (OCUSD.M.2.(
▮	4	3	2	173	3	3	4	1	▮	4	4	2	4
▮	4	3	2	166	2	1	2	2	▮	2	3	4	3
▮	4	4	4	193	4	4	4	4	▮	4	4	4	4
▮	4	4	2	188	4	3	3	4	▮	4	3	4	4
▮	4	4	4	190	4				▮	4	4	4	4
▮	4	3	3	173	2	2	3	3	▮	4	4	4	4
▮	3	3	2	168	2	2	3	1	▮	1	4	2	4
▮	4	4	4	183	3	4	3	4	▮	4	4	4	4
▮	4	4	3	179	4	3	3	4	▮	4	4	4	4

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Score View

Teacher: ███████████ Class: [S1 4(A) Pre-Calculus ▼] [PowerTeacher Pro]

[BT Formatives] [BT Quarterly] [MAP - Reading] [MAP - Mathematics] [MAP - Language Usage] [AIMSweb - Reading] [AIMSweb - Mathematics] [PARCC - ELA] [PARCC - Mathematics] [SAT EBRW]
[SAT MATH] [Grades] [Standards]

Key				
Does not yet meet expecatations	Partially meets expecatations	Approaches expecatations	Meets expecatations	Exceeds expecatations

▼

[Student ▼] [ ] [+]

[Clear] [Apply]

12 of 12 items

Student ▲	04/05/2017 SAT MATH Apr 2017	04/05/2017 PSAT10 MATH Apr 2017	10/11/2017 PSAT/NMSQT MATH Oct 2017	12/15/2017 T1 Grade	12/20/2017 E1 Grade	12/20/2017 S1 Grade
	490			B	C+	B
		500		D+	F	D
		450		F	F	F
		440		B+	D	B
		470		B-	D	C+
	380			D-	F	F
		350		C-	F	D-
	460			A-	B-	B+
				A-		A-
		510	540	B	B	B
	SAT MATH Apr 2017	PSAT10 MATH Apr 2017	PSAT/NMSQT MATH Oct 2017	T1 Grade	E1 Grade	S1 Grade
				D+	F	D-