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TechSmart Initiative for Student Success
SY 17-18 Evaluation Executive Summary

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Executive Summary

The Mt. Hood Cable Regulatory Commission (MHCRC) launched the TechSmart Initiative for Student Success in fall 2014, with plans to strategically invest a total of about \$19 million through 2021 in local public schools to positively impact academic outcomes for all students in Multnomah County. The TechSmart Initiative provides grants and evaluation resources for Multnomah County school districts to identify effective classroom instruction that uses technology to foster improvement in academic outcomes for all students and to share successful strategies across the school districts. Schools participating in the TechSmart Initiative in School Year 2017-18 (SY 17-18) include Gresham Barlow School District (GBSD), Parkrose School District (PSD), Portland Public Schools (PPS), and Reynolds School District (RSD). David Douglas School District (DDSD) had their final year of grant funding in School Year 2016-17 (SY 16-17) but continued technology integration and evaluation efforts in SY 17-18 and are included in this report. The TechSmart Initiative is aligned with the collective effort of the broader community engaged in the All Hands Raised Partnership. The MHCRC invests in district efforts to close the achievement gap and make progress on the following academic outcomes key to student success:

Kindergarten Readiness ■ 3rd Grade Reading ■ 8th Grade Math ■ 9th Grade Credit Attainment ■ High School Graduation ■ English Language Learners' Annual Progress

The MHCRC works closely with each school district as a planning and funding partner to develop a grant project plan tailored to each individual district's priorities. The MHCRC has two overarching goals for the TechSmart Initiative:

Goal 1: School districts funded by MHCRC grant investments will understand and implement effective instructional strategies and practices that use technology to foster improvement in academic outcomes for all students.

Goal 2: The MHCRC and school districts will validate and disseminate effective instructional strategies and practices that use technology to foster improvement in academic outcomes for all students.

Although the initial TechSmart grant investments took place during School Year 2014-15 (SY 14-15), formal program evaluation did not begin until School Year 2015-16 (SY 15-16) when PRE was contracted by the MHCRC to lead this evaluation. After multiple years of implementation each of the five districts, the evaluation has shown that promising instructional practices are emerging and initial recommendations can be made to guide future TechSmart grant investments. These promising practices are highlighted below followed by a summary of the SY 17-18 evaluation organized by the seven factors identified as essential for schools to effectively transform into technology-rich teaching and learning environments. The factors do not stand in isolation from each other; many are linked and substantially overlap. Additional evaluation findings from the SY 17-18 evaluation are summarized as well.

Promising Instructional Practices and Outcomes

Results from three school years of data collection are showing promising instructional practices that have emerged from TechSmart grant project implementation.

Differentiating for Student Subgroups

The use of technology to differentiate instruction for student subgroups has emerged as a promising instructional practice. By the end of SY 17-18, at least 85.0% of teachers at DDS, GBSD, PSD, and RSD agreed or strongly agreed with the following statement: “I am confident in my ability to differentiate instruction using student data”. Just under seventy percent (67.6%) of Cohort 1 and 55.8% of Cohort 2 PPS teachers agreed with this statement. Teachers reported using technology to differentiate for all students, however, differentiation seems to be a particularly useful instructional practice for historically underserved student subgroups. Teachers across all districts highlighted the use of technology to differentiate for student subgroups. Technology allowed teachers to differentiate for SPED students and LEP students in particular. The technology gave teachers the ability to individualize learning for children, allowing them to tailor lessons for a group of students at varied levels and abilities. Teachers across all schools described the ways Chromebooks and/or iPads allow them to individualize student learning in a way that they were not able to do before. Teachers at DDS reported using online resources such as Math IXL and Imagine Learning for differentiation. Imagine Learning allows teachers to differentiate for LEP students by having them work independently on their devices while the rest of the class participates in a separate whole group or small group lesson. GBSD also indicated that they use online applications to differentiate for math, pointing to i-Ready as a useful tool for targeted instruction. In SY 17-18 differentiation emerged as a particularly promising instructional strategy in GBSD, in response to desires in the district in SY 16-17 to focus more on using technology to differentiate instruction. PPS heavily emphasized the use of Lexia to differentiate for student subgroups, particularly for LEP students. One teacher said:

I think that Lexia has been extremely useful, because especially in kindergarten, children come at a huge range of abilities and backgrounds. This sort of levels that out because it meets them right where they are, and Lexia never gets frustrated.

Teachers at RSD indicated that technology allows them to individualize learning for student subgroups by targeting the specific gaps in an individual student’s learning. Like PPS, RSD is using technology to support LEP students. The steady rise of Schoology use in RSD allowed teachers to differentiate modes of access to content for English Language Learners.

Increased Access to Resources

Another promising practice that remained present in the SY 17-18 evaluation is the use of technology to communicate with and provide resources to students. This is particularly relevant for the grants in higher grade levels where students are accessing curriculum materials independently. Reynolds School District (RSD) and Parkrose HS teachers commented about students getting notes and class materials online, which allows teachers to spend more time in class focusing on instruction and supporting students who need extra support. One RSD teacher said, “I have one kid in particular who doesn’t have the ability to do work at home. He helps take care of the family, or of his younger siblings or something. And he was able

to get some work done on the bus on the way home rather than at his house, because he did it through his phone. So, rather than having to wait until he got home to pull out a worksheet he was able to get something done on the bus.” Even when students don’t have access to computers at home, being able to access content anytime and anywhere on their own devices (such as smart phones) leveled the playing field for historically underserved students. Teachers at PSD also pointed to the way that the grant has given all students increased access to technology. Providing student subgroups access to technology through school-provided iPads or their own devices has allowed historically underserved students

Student Academic Outcomes

The TechSmart Initiative evaluation logic model includes common criteria for identifying instructional practices and strategies as “promising” or “effective.” One such criteria is that the practice indicates evidence of reducing the achievement gap among student subgroups. The student subgroups considered for TechSmart are Special Education (SPED), English Language Learners (ELL), students of color and low-income students. Student achievement data were examined for all five TechSmart schools. Although the student achievement data are not yet showing consistent quantitative evidence that the new instructional practices are improving academic outcomes over and above their comparison groups, there were a few noteworthy findings from the SY 17-18 evaluation.

At DDS student achievement data serve as preliminary evidence that the new instructional practices are improving academic outcomes for treatment cohorts over and above the instruction received by the comparison group. However, there is not strong quantitative evidence at this point in time that the new instructional practices are improving student academic outcomes for treatment sub-groups over and above the improvement in outcomes for the comparison sub-groups.

Student achievement data at PSD does not show evidence that new instructional practices are improving academic outcomes for treatment cohorts over and above the instruction received by the historical comparison group, nor does it show promise for improving student academic outcomes with at-risk subgroups.

Preliminary results from GBSD showed that the Treatment Cohort had a higher percentage of students performing at benchmark on the DIBELS assessment than the Comparison Group in kindergarten and first grade. Although the percentage of Cohort 1 students performing at benchmark decreased from kindergarten to 1st grade, the percentage of students at benchmark was equal to or above the Comparison Group in 1st grade. This trend was true for LEP, SPED, and minority student subgroups.

RSD’s student achievement data from SY 17-18 indicates that new instructional practices in the district are showing promise for improving student outcomes. Cohort1 and Cohort 2 TechSmart students had significantly higher math credit attainment in 7th grade and significantly higher cumulative math credits than the historical comparison group. In addition, the results of RSD’s subgroup analysis are promising and provide preliminary evidence that instructional practices are improving academic outcomes for at-risk student subgroups.

Student achievement data at PPS indicates that there were fewer Cohort 1 students performing at benchmark on DIBELS assessments than Comparison Group students. Student achievement data also indicates that across targeted subgroups, Cohort 1 students performed worse on the DIBELS assessments than Comparison Group students but slightly better on the ELPA assessment.

School Year 2017-18 Summary

Technology Transformation Factors

Teaching Effectiveness

Teaching effectiveness is characterized by a district that supports regular, inclusive, and shared professional development (PD) among teachers. PD for teachers continued to be a key aspect of project implementation for each of the five districts included in the SY 17-18 evaluation. However, the format of this PD varied across districts as described below.

The PD provided at Earl Boyles Elementary School in David Douglas School District (DDSD) consisted of informal opportunities in their first year after grant implementation. PD was minimal and consisted mainly of drop-in visits from the district-level technology integration coach. The absence of a building technology coach and a lack of group PD opportunities pushed teachers to learn from each other through teacher-led trainings. While some teachers reported that they did not receive any PD in SY 17-18, others noted working closely with the district technology integration coach or with other teachers.

Teachers at Parkrose High School described the PD they received during SY 17-18 as limited to the push-in model by the technology support person. The technology support person is made available to teachers in their classroom as needed. In addition to the individualized support provided by the support person, teachers participated in optional group PD sessions focused on integrating new applications of technological assets into the classroom. These group sessions occurred during time set aside for Professional Learning Communities (PLCs) and were not grant-funded. Some of these trainings were peer trainings led by teachers who were confident in certain instructional strategies or applications. In general, teachers found individual PD to be more useful than group.

The PD for the RSD grant project for middle school and 9th grade math in SY 17-18 had the same three components as the first two years of grant implementation. First, teachers met for instructional lab cycles where teachers participated in classroom observation. These classroom observations allowed teachers to gather data on type, frequency, and depth of student dialogue about math. Teachers then used this data to co-plan lessons. Lab cycles were supported by a district PD administrator who provides support specifically for English language development. In the second PD component, all three cohorts of teachers convened for monthly late start meetings where teachers collaborated across grade levels and buildings. These meetings were led by the IT TOSA and participating teachers. In SY 17-18 the district reinstated a full-time IT TOSA, up from half time in SY 16-17. The IT TOSA was available for individualized PD sessions. The IT TOSA aimed to push in to every teacher's class weekly and was at each building at least one day per week. These one-to-one meetings were driven by individual teacher's needs. RSD's PD design for its TechSmart grant project included a shift in PD responsibility from the district technology integration coach to teacher-led activities. Several RSD teachers described how they have received PD from other teachers. Specifically, Cohort 2 and Cohort 3 teachers commented on how Cohort 1 teachers were a source of mentoring support for the technology integration. Teacher-to-teacher PD was emphasized in SY 17-18, and teachers reported success with this model. One teacher noted "when I meet with other teachers we share useful apps and ways of integrating more technology into our lessons".

Portland Public Schools (PPS) offered a combination of group and individualized PD opportunities to the ten elementary schools involved in the second year of grant implementation. Cohort 2 teachers participated in a summer on-boarding workshop during the summer of 2017 where they discussed topics such as racial equity, device management, classroom practices, myON use, Lexia use, technology use in dual language classrooms, and family engagement. A combination of embedded PD was offered to Cohort 1 and Cohort 2 teachers in SY 17-18 including PLCs; principal- or school leadership-led activities; one-on-one conferencing with coaches; modeling and push-in PD from coaches; and co-planning among teachers, coaches, and administration. Individualized PD was more utilized than group PD among PPS teachers, and some teachers expressed a desire for increased access to group PD. However, teachers rated the individualized PD they received as very positive, and they reported receiving strong support from their onsite coaches. Teachers at PPS also reported co-planning and peer teaching with each other, where they were able to share and receive knowledge from their coworkers.

In Gresham Barlow School District (GBSD), teachers and leaders from the two TechSmart elementary schools described PD as a mix of group and individualized opportunities in their second year of grant implementation. One principal emphasized the importance of the differentiation their PD model allows: “The key to all of it has really been differentiated PD. We haven’t done a lot of PD with the whole staff all together all getting the same information. It has been more about ‘Where is this team or individual at and what are their next steps?’” These small group PD sessions included on-site team trainings, ITC classroom modeling, and Tech Walks. Individualized PD opportunities consisted of one-on-one sessions with the full-time, onsite ITC. Teachers specifically noted that without their ITC they would not have been able to make progress towards improving student academic outcomes due to the overwhelming nature of using the technology to support instruction.

Digital Age Learning Culture

Digital age learning culture is defined as districts embracing a cultural shift and viewing technology as a positive support in teaching and learning. SY 17-18 evaluation results show that digital culture is increasing in all of the districts, although more so in some than in others. In DDS, one year post-grant, indicate that teachers continue to use technology to support instructional practices and teacher technology use seems to have remained relatively consistent from the SY 16-17 evaluation, however, rather than having increased. At GBSD, there appears to be an abundant and growing digital age learning culture, as the frequency of technology integration increased in the district not only from SY 16-17 to SY 17-18 but also from the beginning to the end of SY 17-18. Parkrose also experienced growth in the presence of a digital age learning culture in SY 17-18, and 86.3% of teachers reported using technology to deliver instruction to their class a moderate amount to a great deal. Only about half (51.1%) of Parkrose students, however, reported an increase in the use of technology, indicating that there is still room for improvement in this area in terms of students perceptions of access to technology. There was a slight improvement in the quality of the digital age learning culture at PPS as well, as at the end of SY 17-18 62.5% of Cohort 1 teachers and 75.0% of Cohort 2 teachers reported using technology in their classroom; these results were an improvement from the SY 16-17 evaluation. The Reynolds evaluation provides conflicting evidence regarding the digital age learning culture. While the rate of technology use to support instruction increased from beginning to end of SY 17-18 for Cohort 2, the rate of technology use to support instruction for Cohort 1 teachers decreased slightly from SY 16-17.

Visible Leadership

Visible leadership exists when district leaders are actively working with key internal and external communities to accomplish change; using data to guide change; and sharing and seeking out learnings from within and outside of the district.

In interviews with leaders, most provided examples of sharing best practices related to grant implementation among TechSmart districts and within their own districts. For example, Reynolds reported sharing their successes with technology integration with other TechSmart and non-TechSmart districts in East County. These collaborations allowed teachers to showcase their own successes and learn from other districts. All of the IT TOSAs from East County also joined together to form the East County Technology Consortium which aims to streamline online PD for teachers in the district. Parkrose has not prioritized collaborating with other districts but they do participate and meet regularly with other East County districts, although the material covered is not always directly related to the grant. PPS has shared learnings from the grant within the district and externally to other districts in a limited capacity. The coaches attended the Integrated conference in Portland which gave teachers the opportunity to interface with other districts who are prioritizing technology integration. GBSD is actively involved in the instructional technology community and regularly attend events locally and nationwide. They also report actively sharing grant progress over social media. Locally, GBSD hosts Tech Walks and has plans for a one-day tech summer camp to teach other districts about technology implementation. DDSD continues to offer other East County districts, and has hosted other districts in order to demonstrate how they are integrating technology. They share learnings internally across the district using the Google Ninja program. While districts are working internally with themselves to share findings, and across districts locally, all five districts had minimal experiences working with other external communities to accomplish change.

Data Driven Improvement

Districts engage in data driven improvement efforts when current, relevant, and high-quality data from multiple sources are used to improve schools, instruction, PD, and other systems. Some districts showed emerging trends of consistently and successfully using data to improve their instructional strategies, while other districts still had substantial room for improvement in this area. One year post-grant, it appears that teachers at DDSD have become less confident and comfortable using data to improve instruction, professional development, and student performance. While the majority of teachers in DDSD are still comfortable and confident using data to improve instruction, the percent of teachers who reported strong confidence in this area decreased from SY 16-17, when 100.0% of teachers agreed with all four survey items inquiring about confidence surrounding data driven improvement. Teachers in GBSD report an increased use of data-driven instructional strategies over the course of SY 17-18, and by the end of SY 17-18 GBSD teachers demonstrated high levels of confidence in various areas of technology integration, including differentiating instruction using student data. In SY 17-18 Parkrose teachers greatly increased their use of data driven improvement strategies. Teachers feel very confident in their ability to implement data-driven instructional strategies. Most teachers felt very comfortable using formative data to guide their instruction, although some teachers reported that they did not engage in this practice at all. Teachers at PPS consistently expressed confidence using data to drive instructional improvement using Lexia. Some teachers also reported positive experiences using data from myON to guide their instruction. Reynolds' evaluation again produced mixed results; while Cohort 2 teachers' use of formative data to

guide their instruction increased throughout SY 17-18, Cohort 1 teachers' confidence in their ability to drive their instruction somewhat decreased throughout SY 17-18.

Funding & Budget

This factor of successful technology integration is characterized by a district that repurposes budget resources and seeks outside funding to focus on promising instructional practices and technology supports. Four of the districts provided at least one example of repurposing resources to support technology. For example, DDSD, who no longer has access to any grant funding, continues to fund a district technology support staff and the Google Ninja program. GBSD has used non-grant funds to fund coaches full-time and provide devices for fourth and fifth grade classes in addition to K-3. PPS has continued to take significant efforts to repurpose resources to support technology integration; more specifically, they have directed Title 1 funds to purchase Chromebooks, Lexia, and myON and used district funds to support technology integration for fourth and fifth grade classrooms in addition to K-3. Reynolds is also using district funds to move technology into non-math classrooms, which are not supported by the grant. Parkrose has made steps towards using non-grant funding to support technology integration but reported that they are not able to do so to the extent they would like to because of district-wide budget constraints.

Strategic Planning

Strategic planning refers to the idea that a district's strategic plan reflects shared commitment to improving outcomes for students. In interviews, district leaders talked about this in relation to technology efforts. Leaders across most districts provided examples of how technology is part of their strategic efforts to improve student outcomes. Leaders at DDSD indicated that their Science, Technology, Engineering, Arts, and Math (STEAM) initiative continues to be an integral part of the district's strategic plan; technology is at the forefront of this initiative. GBSD also considers technology to be an integral part of their strategic plan. GBSD has taken concrete moves to prioritize a commitment to technology integration, including hiring a new "tech-forward" superintendent and implementing a new technology innovation steering committee. Parkrose has similarly integrated technology integration into their strategic plan; one principal iterated, "I feel like technology isn't its own separate goal but its incorporated into the rest of our goals. It's an expectation that we use technology. We work hard to make sure that technology doesn't feel like one more thing to add on, but that it's improving what we're already doing and acting as a resource". Reynolds has formed their strategic plan to align with the goals of the TechSmart grant, and they have used the grant as an "opportunity to have purposeful conversations about classroom instruction, specific learning strategies that then we can use technology to supplement that and to make sure we are closing the achievement gap". Leaders from PPS were not able to speak to how technology fits into their districts' strategic plan.

Engaged Communities & Partners

As mentioned above in the Visible Leadership section, the districts have not provided much evidence of work towards engaging external communities and partners but many identified efforts to engage parents in technology integration. Teachers in multiple districts are engaging parents through classroom blogs, student-led conferences, and the use of applications, such as Seesaw and Classroom Dojo, where parents can view and comment on student work. Leaders at PPS, RSD, and PSD gave examples of how staff involved in the TechSmart grant are involved in professional networks to stay up to speed on complementary initiatives. As noted last year, these examples provide evidence that districts are working

to engage communities and partners in their efforts, but more evidence is necessary to understand whether engaging other external communities is a critical element for successful technology integration in instructional practices.

Additional Findings

- After three years of evaluation, PRE has continued to learn about the different models for rolling out technology implementation efforts across districts and whether these models have stimulated progress towards the MHCRC goal to identify effective instructional practices that use technology to foster improvement in student outcomes.
 - The SY 17-18 evaluation has indicated that there may be a difference between how the TechSmart grant affects access to technology between the lower grades and the upper grades. That is, while teachers and leaders at GBSD, PPS, and DDSD consistently reported that the grant has leveled the playing field for their historically underserved students, giving them access to resources which they may not have at home, teachers and leaders at PSD and RSD expressed more mixed opinions regarding how the grant has expanded access to technology for their students. This may be because middle and high school students are expected to do more technology-related work at home after school hours than elementary school students are. While historically underserved elementary school students may purely benefit from the access to technology they receive at school, historically underserved middle and high school students may actually be put at a disadvantage when they are expected to complete assignments at home that involve using technology.
 - Results from the Reynolds evaluation point to the importance of supporting Cohort 1 teachers in terms of professional development. While Cohort 2 teachers at Reynolds improved in most areas from the beginning of SY 17-18, Cohort 1 teachers did not show the same growth. Notable, Cohort 2 teachers talked at length about the support they received from Cohort 1 teachers, pointing to the strong digital age learning culture present in the district and indicating that teacher-to-teacher training (both formal and informal) make up a significant portion of their PD. However, the data indicates that Cohort 1 teachers did not experience this same level of support, perhaps because they were pioneers in the grant who did not have a cohort of teachers above them to lean on for support. In the future, districts should keep in mind that the first cohort of teachers may need continued extra support in the form of PD beyond the first year, in order to prevent them from decreasing in comfort and confidence integrating technology into the classroom.
 - The SY 17-18 evaluation resulted in compelling data regarding the sustainability of technology integration efforts, particularly looking at the state of technology integration at DDSD one year post-grant. In large part, technology integration has either decreased or remained consistent in SY 17-18 compared to SY 16-17, with very little growth. Teachers at DDSD indicated that they did not feel supported by the district with regard to technology integration in SY 17-18; there was limited access to a technology integration coach and they received little to no PD related to technology integration. GBSD, on the other hand, appears to be putting themselves in a better position in terms of sustaining the work of the grant, as

they are prioritizing full-time, on-site coaches throughout the extent of their grant. Collecting data on GBSD post-grant will help us to understand how the technology integration efforts may be better sustained so that districts can continue to grow even after grant funding has ended.

- The PPS evaluation indicates that the TechSmart initiative has been somewhat hindered by the co-occurring EBBL adoption. While the TechSmart initiative supported EBBL in many ways, the tumult surrounding the newness of the new literature adoption may have reduced the transformative potential of the technology integration. This was partly due to the mixed level of support received by teachers from their building administrators and district leaders as both these levels of leadership struggled to support both EBBL and TechSmart at the same time. In the future, districts should not attempt to launch the TechSmart initiative at the same time as another new adoption. While TechSmart was intended to support EBBL, it may have been better able to do so after a couple of years of the district getting used to the new literacy adoption (or vice versa).