

TECHSMART IMPACT REPORT

2014-2022



TECHSMART INITIATIVE

\$15,884,647

FUNDS AWARDED

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 approximately \$19 million through 2023 in local public schools to positively impact academic outcomes for all students in Multnomah County. The TechSmart Initiative aligned with the collective effort of the broader community engaged in the All Hands Raised Partnership.

The MHCRC had two overarching goals for the TechSmart Initiative: 1) MHCRC funded School districts will understand and implement effective instructional strategies and practices that use technology to foster improvement in academic outcomes for all students, and 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. The MHCRC invested in district efforts to equitably close the achievement gap and make progress on academic outcomes key to student success, including kindergarten readiness, 3rd grade reading, 8th grade math, 9th grade credit attainment, high school graduation, and English language learners' annual progress.

The MHCRC is made up of 8 dedicated community volunteers, backed by professional office staff. It was created by an intergovernmental agreement (IGA) among the cities of Fairview, Gresham, Portland, Troutdale, Wood Village and Multnomah County ("jurisdictions") in an effort to provide enhanced public benefits from cable communications franchising and regulation.

INITIATIVE GOALS

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.

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.

FCC CHANGES

In 2018, the Federal Communications Commission (FCC) proposed a new rule (621 order) that would negatively impact local communities to the benefit of cable companies. The rule undermined public benefits (which are the basis for the MHCRC's grant funds) negotiated in cable franchise agreements and allowed companies to deduct from franchise fees the value of certain benefits, such as community access channels or live video transport of city council meetings. After a public comment period during which the MHCRC joined a coalition of 35 local governments to fund and file comments opposing the proposed rule, the FCC did adopt the rule and the order took effect in September 2019. In response to the rule, the MHCRC was no longer able to fund certain types of projects. Unfortunately, TechSmart funding was cut short by about \$3 million due to concerns over the 621 order.

DAVID DOUGLAS SCHOOL DISTRICT

Two grant projects were conducted with David Douglas School District involving the purchase of equipment such as Chromebooks and Smart Boards, providing a technology integration coach, and funding professional development to support staff with the goal of utilizing technology to improve kindergarten readiness, 3rd grade reading outcomes, English language learners' progress, increased student achievement in mathematics, and closing the achievement gap of historically underserved populations.

REYNOLDS SCHOOL DISTRICT

Two grant projects were conducted with Reynolds School District. The first focused on improving student achievement in 8th grade math, 9th grade credit attainment, and English learners' progress by providing devices including Microsoft Surface Pros (teachers), short throw projectors, Dell Venues (students), and 3D printers. The second project focused on expanding "Constructivist Classrooms" across high schools to assimilate the use of technology throughout the student and teacher instructional experience.

GRESHAM-BARLOW SCHOOL DISTRICT

Two grant projects were conducted, with the first involving the purchase of iPads for kindergarten students, Chromebooks for students in grades 1-3, and professional development to support staff with the goal of improving 3rd grade reading outcomes and English language learners' progress. The second project focused on embedding technology in middle school math to provide targeted support for increasing 8th grade student achievement in math and 9th grade math credit attainment.

6

School Districts

9

Funded Projects

TechSmart funded **over 10 different types of devices** including but not limited to Chromebooks, Smart Boards, robotics kits, projectors, sound bars, and production kits.

10+

TechSmart funded **over 16 different types of applications** including but not limited to Lexia, MyOn, Seesaw, Google Classroom, Jamboard, iReady, Sphero, Flipgrid, Schoology, and Office 365.

16+

PORTLAND PUBLIC SCHOOL DISTRICT

This five-year grant project supported the K-5 Equity-Based Balanced Literacy (EBBL) framework adoption at Portland Public Schools. Thirty-one schools across the district received professional development and technological infrastructure with the goal of improving 3rd grade reading outcomes and English language learners' progress.

CENTENNIAL SCHOOL DISTRICT

This grant project funded Chromebooks for students and staff, projectors and document cameras for classrooms, digital microscopes and other experiential science technology, Hapara licensing, a STEM coach, and PD for teachers, all with the goal of increasing Project-Based Learning to close the achievement gap for historically underserved populations.

PARKROSE SCHOOL DISTRICT

This grant project provided technology infrastructure and teacher professional development to support 1:1 student devices with the goal of improving the district's performance on the student success indicators of 9th grade credit attainment, English language learners' progress, and high school graduation.

TechSmart Funding Allowed Districts to **TAKE RISKS**

All districts were afforded the ability to try new technologies, new instructional strategies, and new PD formats using the TechSmart funding!

In Portland Public Schools (PPS), TechSmart funding combined with a small scale start in 5 schools, allowed for trial and error with high-risk program elements like expensive tech programs, devices, and infrastructure to see how successful they were within the school environment. Providing a large supply of Chromebooks was also a big risk and required building out technical support.

In Reynolds School District (RSD), the TechSmart funding allowed the district to take instructional risks like trying out a flipped classroom model and purchasing expensive technology such as 3D printers and short throw projectors for Math classrooms. RSD also took a risk by pairing TechSmart PD with their pre-existing lab cycle format.

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The fact that we were supplying classrooms with so many Chromebooks was a huge risk in itself. This meant that we had to work on building our district support technically, professionally, and developmentally to make that happen. That is something that we would not have done without TechSmart.

-PPS Techsmart Project Manager

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Our teachers have used tech to create a flipped classroom in which the students review lessons at home as a part of homework and prep for the next day. Teachers then use class time to engage with students about their learning and observations. This allows teachers and students to dive deeper into content.

-RSD principal SY 19-20

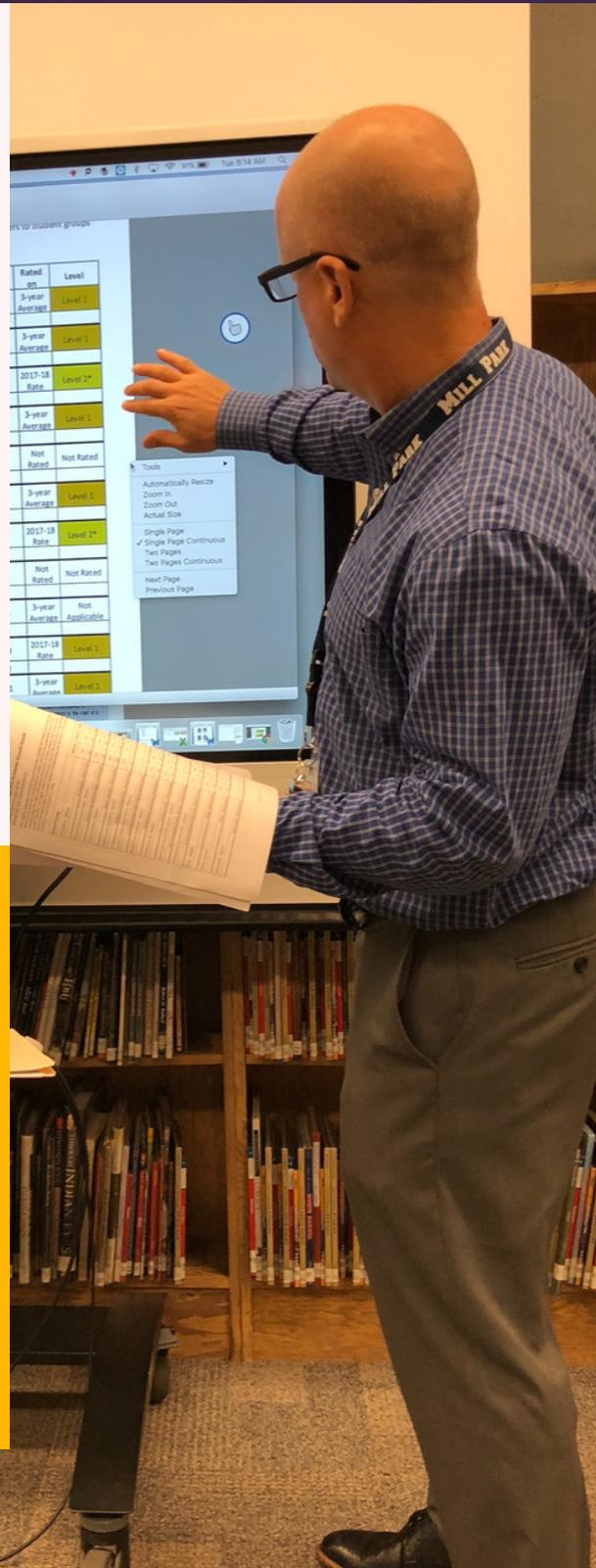


TECHSMART SCHOOLS WERE PREPARED FOR THE PANDEMIC

- Students were familiar with Google classroom and SeeSaw
- Students knew how to use Chromebooks
- Teachers had established Google classroom environments
- Teachers knew how to embed videos and links in classroom content
- Teachers were able to use more sophisticated tools due to comfort level with learning new technology
- Students could easily login to devices

“My students were already practiced at online instruction. Distance learning was not much different, except that my communication was through email or Microsoft Teams”

-TechSmart School Teacher



GRANT SUCCESSES TO REPLICATE

1 START SMALL & SCALE UP

PPS started with 5 TechSmart schools in Year 1 and eventually scaled up to 31 schools by Year 5. Starting small allowed the district to “try technologies, processes, and instructional strategies and not get it right the first time” and “test solutions in a single school” to then replicate successes with others.

RSD started with a cohort of 13 math teachers in Year 1 of Grant 1 and expanded it to all middle and high school math teachers by the end of Grant 1. Grant 2 expanded to all high school teachers at Reynolds High School and Reynolds Learning Academy.

In David Douglas School District (DDSD), starting small with TechSmart in one elementary school for Grant 1 became a model for the district’s internally funded grant program called the Google Ninjas. This program later funded 50 Chromebook carts across the district.

2 SHARED LEARNING ACROSS DISTRICTS CONTRIBUTES TO SHARED SUCCESSES

Goal 2 of the TechSmart Initiative was focused on disseminating findings. Through the annual TechSmart shared learning events and other informal networking, districts were able to share successes and challenges and learn from each other’s experiences. Districts had conversations and school visits to see what other schools were doing. Monthly tech meetings paved the way for increased communication and collaboration around technology within schools.

A group of technology coaches from East County districts (RSD, GBSD, DDSD) chatted in the hallway after the first TechSmart shared learning event in 2017. This resulted in the formation of the East County Technology Consortium which was a group of tech coaches that met monthly to share learnings. Today this group is hosted by the MESD and continues to hold monthly tech meetings.

“I think it was great hearing from other districts what they were doing. How they were rolling things out. We were able to learn from other districts. I know vice versa, we’ve been able to share with other districts what we did. I think all of us learned something from each other. We were able to have other districts come in and visit with us and see what we’re getting in our schools and have a lot of conversation, not just about us, but what they were getting too.”

“TechSmart allowed and paved the way for districts to communicate and collaborate with each other for technology.”

GRANT SUCCESSES TO REPLICATE

3 COACHING WAS IMPERATIVE TO INCREASING TECHNOLOGY SUPPORTED INSTRUCTION FROM TECHSMART TEACHERS

“I think especially for schools that had year after year of full coaching, there were lasting big changes in those teachers, in how they approach, and how they're integrating technology.”

“I think the biggest success and the most integral part was the coaching design. The coaching model was key because that's what really moved the needle and that's what really showed the biggest support to the teachers and the staff.”

“I can't even imagine if there was not a tech coach in the district or if a couple of the schools hadn't gone through this TechSmart initiative, how uncomfortable people would be using technology.”

4 CONSISTENCY IN LEADERSHIP MATTERS

TechSmart gained substantial footing at PPS in 2018 with the hiring of the Director of Learning Technologies who would remain throughout the rest of the grant along with TechSmart Program Lead, and lead TechSmart TOSA (Teacher on Special Assignment).

RSD maintained consistent leadership throughout the entire TechSmart initiative. The lead TechSmart administrator became the first to hold the district leadership role of Director of Instructional Technology when it was established in 2019.

DDSD leadership remained consistent throughout the two grant cycles and has largely been placed in the hands of the district Technology Integration Coach, who stated, “I was very fortunate to work with two amazing directors who were 100% behind the TechSmart work and very supportive too. They would take TechSmart reports to cabinet meetings to show proof of grant success and advocate for the work!”

Districts with less consistent leadership, including Centennial School District and GBSD, struggled to maintain grant momentum, particularly through the pandemic.

TechSmart at the Forefront of **DIGITAL EQUITY**

A focus on “high need” schools: The first PPS grant Cohort included one Title I school and one high-income school along with three mid-range SES schools in order to compare differences in initial implementation. Through Cohort 1, the district saw clear evidence that improvements in infrastructure and technology accessibility should go toward schools with the highest need. By the end of the initiative, the grant was targeting all Title I schools.

“TechSmart allowed us to think about things in terms of what kids are going to need, and making sure that we're getting a good balance... We kept that balance in the first couple of years. Then after that, we started to really focus on the Title I schools... It was clear that we needed to.”

Digital Access became a priority during the pandemic: The pandemic forced districts across the country to see that simply giving students a device did not provide them access. Being prepared with the devices allowed TechSmart districts to focus on access during the pandemic.

“People didn't really know what a dead zone was... It really shined the light on our need for internet access for all. We have since had the City of Wood Village reach out to put some money towards increasing internet access for our entire community.”



TechSmart at the Forefront of **DIGITAL EQUITY**

Equity became infused into everything... including technology:

“At some point our TechSmart team started saying, 'There's not a department that does this specifically anymore, so it has to be us. We have to figure out what we're doing in our coaching to make sure that our teachers are thinking about racial equity first and foremost when using technology'.”

TechSmart in the classroom vs. comprehensive distance learning (CDL):

“The challenges that come with distance learning, however, can't be overstated. In-classroom use of TechSmart tools increased equity and engagement. As students have shifted to work at home, access to devices, internet, and peer and staff support is highly varied and inequitable. Many teacher plans, especially around PBL work, have been thwarted or underwent significant revision. This new educational landscape has some benefits, such as students and teachers quickly learning new technology tools, but many impacts have been negative. We recognize these challenges and seek ways to grow equity and best practices as we continue into the next school year.”



Student centered learning:

“Technology provides the opportunity for learning to happen without that central control by a teacher. We need to help teachers understand if there's commotion in the room, that doesn't necessarily mean that things are out of control, it doesn't necessarily mean that learning isn't happening. How do we reframe a teacher's understanding of what their role is in a classroom if the technology is there? It's the same mentality that both our equity department and our efforts towards technology integration, were both about overcoming these traditional practices that were rooted in white supremacy and that they can work and should work side-by-side.”

SUCCESS STORIES



Early TechSmart Successes in David Douglas School District:

"I always think about a first-grade teacher from Earl Boyles who at the start of TechSmart and was so "anti-technology" that she made her student teacher check her email. She was that hands-off. Through TechSmart she got introduced to new technology including a SMART Board and Chromebooks. We worked with each other so much and by the end of the Earl Boyles Grant, she was making a troubleshooting document for all the teachers. She was one of the technology leaders and that's truly, truly amazing."

-DDSD Technology Coach

TechSmart paved the way for district level strategic change in Reynolds School District:

District administration discussed how TechSmart set the district up for future technology infrastructure.

"Our district's strategic plan has changed over the course of TechSmart in a big way. The creation of a whole department to support the instructional side of technology was very strategic. During our first TechSmart grant, we saw a desire to increase technology in other departments and grade levels outside of 6th-9th grade math. Because we haven't had stable funding from the state, this desire pushed us to look for different opportunities in how to fund technology in the district. The work with MHCRC set us up to specifically look for technology grants and look for novel ways to support the integration of technology into the classroom. We received these other grants because of the structure we had put into place in our first TechSmart grant. The partnership with MHCRC has set us up well and I cannot imagine the current situation without it."

-Reynolds Administrator

SUCCESS STORIES

Gresham Barlow School District made early strides towards differentiated instruction to support at-risk students

Gresham Barlow School District's (GBSD) first grant showed early evidence of technology-supported differentiated instruction to support at-risk subgroups working towards the TechSmart goal of reducing the achievement gap. A GBSD teacher in 2018 said the following:

"I am able to use tech to assign certain levels of reading to specific kids. This allows everyone to have the same content but not at the same reading level. So when they have a discussion, the kids at different levels are able to participate in the same conversation because they've been exposed to the same things but at their own level. Plus, using the device allows students to have privacy around reading level which increases confidence."

Project Based Learning showed early promise in Centennial School District

Centennial School District's TechSmart grant focused on the use of technology-supported Project Based Learning instruction to foster student creativity, collaboration, communication, and critical thinking. The district showed early momentum in this work as described by a teacher in Year 1 of the grant:

"We got into the final project for the project-based learning and students were making the videos. They would have worked on that for a month if I would have let them. They were super engaged with that and I've never seen that with any other activity that we've done in class before. Students would come in and get started working before class started and I was just there to help them if they needed something. They were self-motivated and it was really cool."

Parkrose School District worked through growing pains of technology integration to inform future Grant design

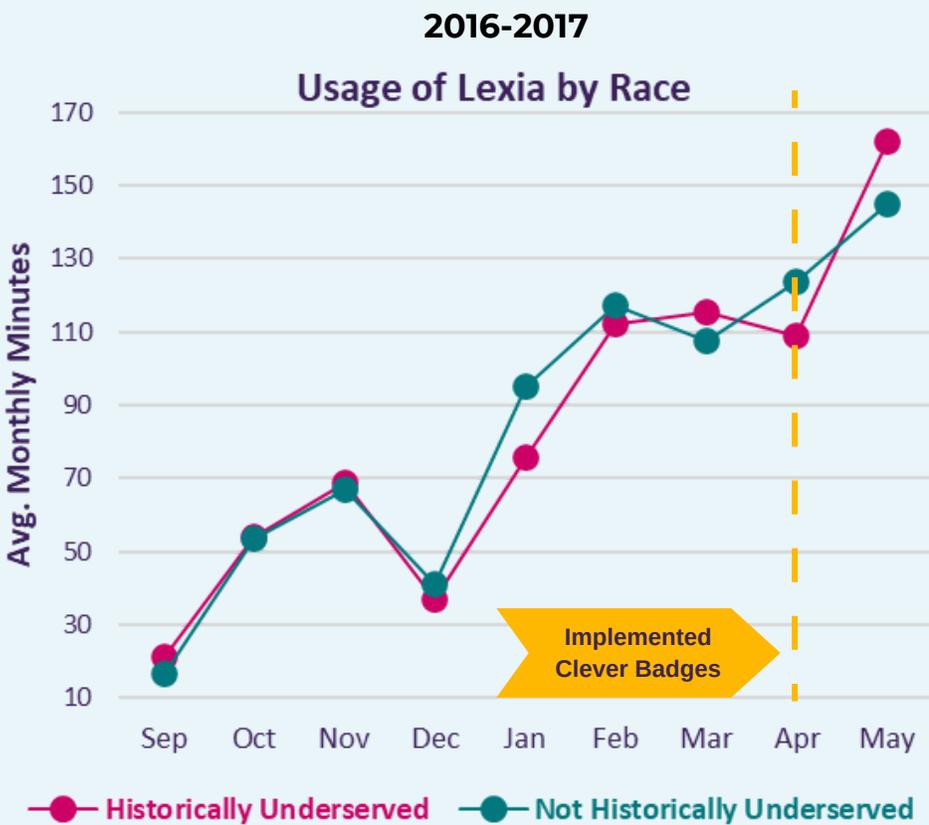
Parkrose SD was the first school district to receive a TechSmart grant in 2014 and had a few key lessons learned that helped pave the way for future TechSmart grant funding decisions:

- Investing initial funding in the district Wifi infrastructure was imperative.
- Due to lack of engagement with group PD, the district learned over the course of the grant that push-in support from the IT director was more beneficial for adapting teaching strategies using the technology. All grants following this were required to have a technology coach in the project plan.
- 1:1 device distribution at the high school resulted in lessons learned around device maintenance, check-out procedures, and content management.

SUCCESS STORIES

Clever Badges at Portland Public Schools created one less growing pain during the Pandemic

The PPS TechSmart team experienced problems early on with students of all grade levels but especially K-1 struggling to remember and/or type their device passwords (learning numbers, learning to type, learning their birthdates). Clever badges allowed students to log in quickly without knowing their birthday and allowed them to use any Chromebook in the room. Instructional time increased immediately, especially for historically underserved students (see graph). Teachers and coaches reported that logging in took significant parts of instruction time, and caused frustration for students. Clever badges were immediately adopted at all schools during the pandemic and made the shift to comprehensive distance learning less challenging.



TECHSMART STUDENT ACHIEVEMENT

The TechSmart Initiative was designed to support the **Oregon All Hands Raised (AHR) Partnership**, which launched in 2012 with a goal of supporting Multnomah County youth from cradle to career. In order to support the community in improving the academic and social well-being of Multnomah County children, the AHR partnership prioritized 12 community-wide indicators that span kids' development from birth to career. The goal of establishing these indicators was to help facilitate thoughtful and measurable action with an acute focus on racial equity.

TechSmart projects were required to work towards one or more of the community indicators present in K-12 education including:

- **Kindergarten Readiness**
- **Kindergarten Attendance**
- **3rd Grade Reading**
- **6h Grade Attendance**
- **8th Grade Math**
- **9th Grade On Track
(Credit + Attendance)**
- **High School Graduation**



Learning doesn't begin and end in the classroom. Transforming children into educated, independent adults is the job of the entire community. The All Hands Raised Partnership gathers Multnomah County's diverse efforts and harnesses them to support kids before, during and after school—from cradle to career."

-All Hands Raised Historical Publication, Ch. 1.

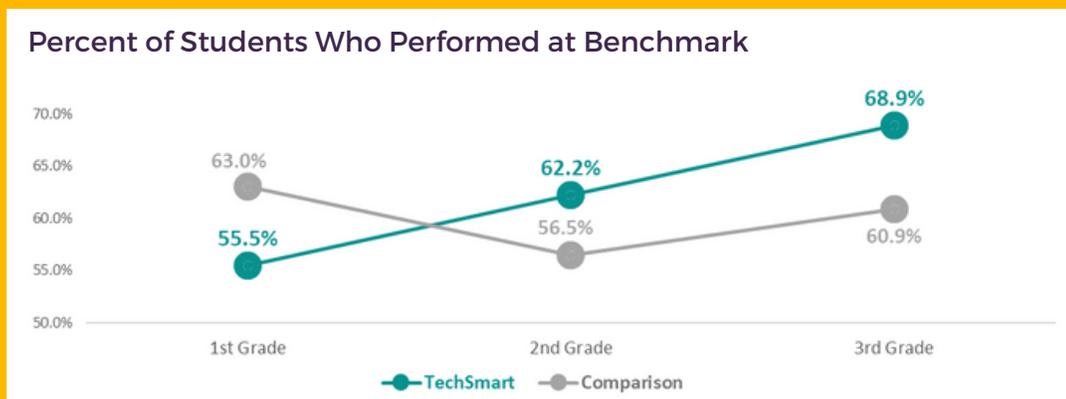


TECHSMART STUDENT ACHIEVEMENT

Each TechSmart evaluation included a quasi-experimental student achievement study in order to examine the impact of the TechSmart Initiative on one or more of the AHR community indicators and understand progress towards closing the achievement gap. Student achievement studies tracked TechSmart cohorts annually and compared progress to either a real time comparison cohort or a historical comparison cohort. Prior to the pandemic, several promising student achievement findings emerged as highlighted below.

David Douglas School District

The EasyCBM assessment was used to examine literacy progress for Earl Boyles students involved in the first DDSD grant. Although this tool is traditionally used for instructional purposes and not evaluation, PRE tracked the percentage of students performing at benchmark on the assessment over time. The graph below shows the percentage of students performing at benchmark for TechSmart Cohort 1 and their comparison group over the course of the grant. The percentage of Cohort 1 students who performed at or above benchmark increased steadily from 1st to 3rd grade, surpassing the percentage of comparison group students who performed at or above benchmark in both 2nd and 3rd grades. There was no consistent trend in the comparison group, indicating TechSmart had a substantial benefit for Earl Boyles students in Cohort 1.



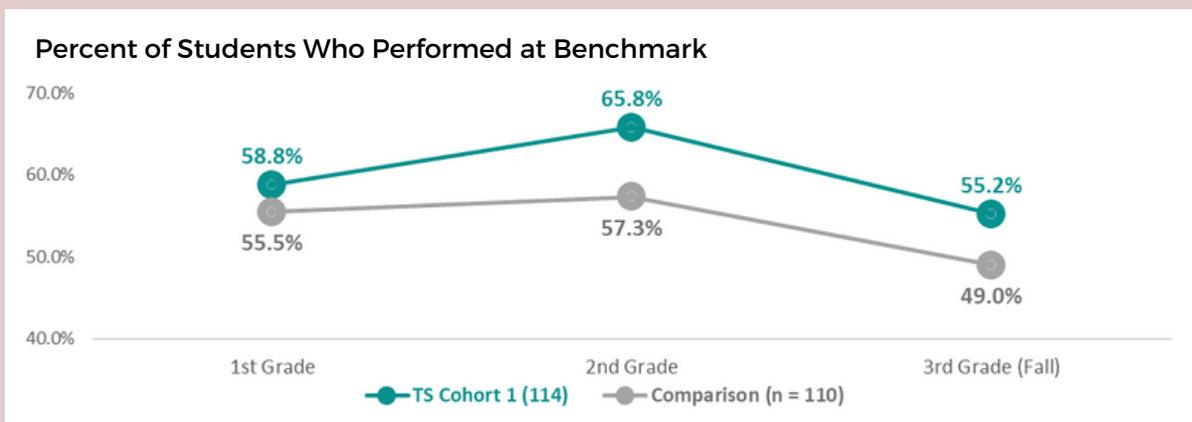
Reynolds School District

Student achievement data examined for RSD TechSmart students in the SY 17-18 evaluation revealed promising findings. **Results showed that by 7th grade, TechSmart Cohorts 1 and 2 had earned, on average, a significantly higher number of math credits and overall credits when compared to a historical comparison group.** Cohort 1 and 2 students from historically underserved subgroups (e.g., students of color, Special Education students, English language learners) were also showing higher math credit attainment than the historical comparison group, providing evidence that TechSmart was closing the achievement gap.

TECHSMART STUDENT ACHIEVEMENT

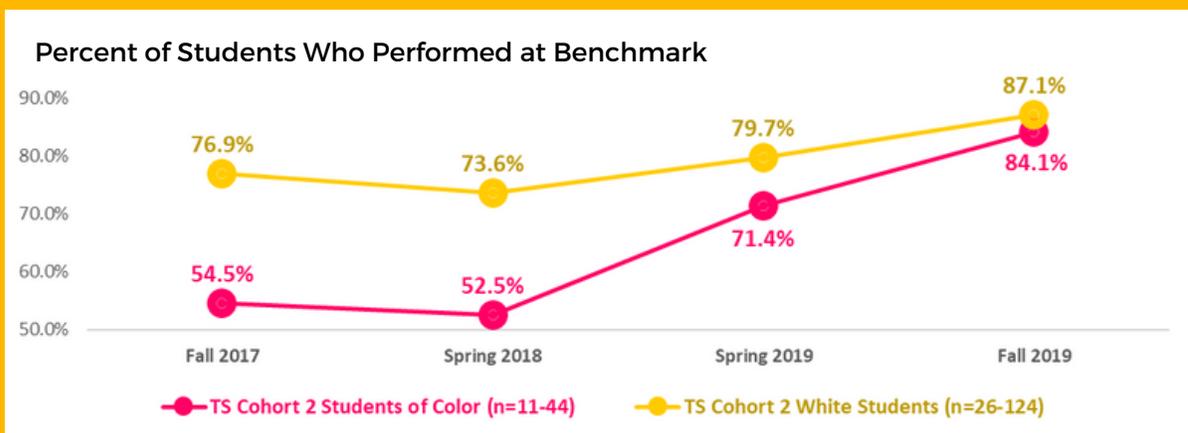
Gresham Barlow School District

The SY 19-20 evaluation for GBSD showed promising achievement findings for the first cohort of TechSmart students on the DIBELS assessment. PRE tracked the percentage of students performing at benchmark on the assessment over time. The graph below shows the percentage of students performing at benchmark for TechSmart Cohort 1 and their comparison group over the course of the grant. A higher percentage of TechSmart Cohort 1 students performed at benchmark than their comparison group across all three grades from 1st grade to 3rd grade. Please note that results are descriptive in nature.



Portland Public Schools

The SY 19-20 PPS evaluation showed evidence of a reduced achievement gap between students of color and white students in TechSmart Cohort 2. Examination of the percentage of students reaching benchmark on the DIBELS showed that the achievement gap closed in SY 19-20 to only a 3 percentage point difference between white students and students of color, as shown in the graph below. Please note that results are descriptive in nature.



LIMITATIONS OF STUDENT ASSESSMENT DATA

This report does not include student achievement findings beyond 2019, due to lack of comparison groups and limited ability to access reliable assessment data. The COVID-19 pandemic played a substantial role in limiting the availability of student achievement data from the 2019-20 school year onward. Impacts of the pandemic on student achievement data included:

- In Spring of 2020, all schools transitioned to virtual instruction and all students began receiving instruction via technology. This limited PRE's ability to draw comparisons between TechSmart and non-TechSmart schools moving forward, as all schools were receiving some level of technology-integrated instruction.
- State testing was not completed in 2020 or 2021 due to the pandemic. This greatly impacted PRE's ability to examine 3rd grade reading and 8th grade math outcomes for TechSmart projects.
- Some formative assessments were conducted during Comprehensive Distance Learning (SY 20-21), which could be used to examine student achievement in some districts. However, the data often lacked reliability and were incomplete in many cases since the assessments had been administered virtually.



WHATS NEXT FOR EDUCATION TECHNOLOGY?

In the final TechSmart closeout interviews, administrators discussed what is next for Education Technology. The response was clear that technology will continue in our districts noted by one district administrator:



I think technology is here to stay. Chromebooks particularly are here to stay in our schools. I'm not super concerned long term about the will to fund technology.”

In terms of what is coming next, district administrators shared the following:

- **Reframing the traditional role of the teacher.** Some TechSmart districts are working to reframe the traditional understanding of the teacher's role in the classroom now that technology is present. There is a goal to help teachers see that commotion doesn't mean they have lost control, but learning is indeed happening. “Technology provides the opportunity for learning to happen without that central control by a teacher.”
- **Intentional use of Applications:** Districts are being more intentional about the use of technology applications. DDS D shared an Educational Program App Approval Flow Chart that asks questions like:
 - Does it align with district and curriculum goals?
 - Is the site free of ads?
 - Is the content appropriate for student viewing?
- **Student Data Privacy:** In line with being more intentional about the use of technology applications, districts are increasing their focus on student data privacy. DDS D performs a risk analysis and requires vendors to sign a “Data Privacy Agreement” in order for an application to be approved for classroom use.
- **Device Maintenance and Continued Innovation:** Districts commented on the fact that in addition to keeping up with all the technology added over the life of the initiative, including 1:1 devices, there will be a need to continue innovating to what is next in the world of Educational Technology, as noted by one administrator, “How will we fund interactive technology and when do we start looking at this? What's that next technology coming around the corner and how do we innovate from here?”

THANK YOU

Funds for the TechSmart Initiative for Student Success derived from the cable services franchises negotiated by the MHCRC with Comcast, Ziplly (formerly Frontier), and Reliance Connects. The cable companies pay three percent of their gross revenues on video services in Multnomah County to support community uses of cable system technology, including funding for the MHCRC's Community Grants program. Cable companies enter into franchise agreements in order to use the public right of way for their business purposes.

This funding initiative would not have been possible without the support and dedication of the members of the MHCRC at the time of, and leading up to, the initiative's launch. Thank you for your tireless support of the communities you serve. Your generous natures, innovative spirits, and commitment to public service are nothing short of inspirational. Thank you to the previous MHCRC Program Manager, Julie Omelchuck, whose professionalism and intellect were directly responsible for the implementation and success of the Initiative.



Pacific Research and Evaluation (PRE) partnered with the MHCRC from 2014-2023 to evaluate each of the TechSmart projects and the initiative as a whole. Research activities included surveys and interviews with students, teachers, technology coaches, and administrators. PRE worked to design student achievement studies and access relevant outcome data from districts. Although the pandemic challenged the TechSmart Initiative and corresponding evaluation in many ways, this report highlights a sample of the many important successes achieved through the work. Please contact Kristi@pacific-research.org with any questions regarding the content of this report.