



Beaverton School District: Telling Their Story Through Data

“The [2021 CoSN Home Internet Connectivity Study](#) funded by the [Chan-Zuckerberg Initiative](#) was an opportunity to deeply understand what connectivity and access look like across our system,” stated Steve Langford, CIO [Beaverton School District](#). Since 2015, the Oregon district of 4000 has provided take-home devices and Sprint hotspots to secondary students as online learning and connectivity solutions. However, the district was not concerned with at-home access to learning for the younger grades since those students did not take-home devices for learning. However, when the pandemic hit and schools went remote, it became critical to understand the implications of technology access on students’ learning ability at all grade levels. According to Langford, the district used anecdotal evidence and individual experiences to determine the impact and accessibility to reliable, robust at-home internet connections. The opportunity to participate in the CoSN Home Internet Connectivity Study provided Langford and his team with reliable data critical for the IT team to understand the various connectivity challenges and tell their story to their constituents.

Outlier

Interestingly, Beaverton was an outlier of the districts studied in the CoSN study regarding having access to high-speed internet. A hub of technology industries, the city’s robust infrastructure has benefited from tech giants investing time and money into accessible high-speed internet for all. So, access to high-speed internet was not a problem for Beaverton SD families. However, the pandemic significantly impacts jobs and financial security, resulting in families’ ability to afford access. So, while Langford’s team knew that they would see higher concentrations in areas of great poverty, what they learned in the study was that there were connectivity challenges throughout the city.

Hotspots Are Not the Solution

As most school districts did at the beginning of the pandemic, Langford and his team focused on the only available connectivity solutions for students and families that included the distribution of hotspots and programs such as Comcast’s Internet Essentials. However, the CoSN study highlighted that hotspots sometimes provided inadequate connectivity. Instead, due to video conferencing and access to the internet for more than one student. For Langford, this data reflected the need for higher orders of thought and systems thinking that did not rely on Beaverton buying hotspots that would end up in landfills in two years.

District vs. Community Issue

The CoSN study helped the Beaverton IT team unpack the nuances inside of access. They realized that it was a school district trying to solve a problem that impacts a problem more

significantly than themselves. According to Langford, “[We] are trying to work with how we do not make this the school district investing lots of money for a very narrow focus around students having access?” The district had already invested a significant amount of money in dark fiber and redundant pathways, sometimes between other public agencies and themselves. So, they began to ask how to best maximize the existing infrastructure build-out by partnering with local public agency partners and collaborating with service providers to provide higher-performing access for the entire community.

The Power of Data

The immense value of the Beaverton district participating in the CoSN Home Internet Connectivity Study was the resulting home internet access data, graphs, and visualizations. According to Langford, “Before we undertook this work, all we had was stories and minimal views into our student experience and what we could capture through our filter logs. The study helped us kind of pull back those covers and say, ‘This is what we look like? Are we happy with that?’” No longer were the stories presented to the school board anecdotal. Instead, reliable data from the CoSN study regarding neighborhoods and home clusters reflected the reality of the lack of internet access for students and families. Many layers of the data led Langford and his team to appropriately engage with different constituencies around the city. While the data from the study did not solve the connectivity issues in Beaverton, they at least got the awareness. At the city level, the data reflected that internet access for students is not just an educational problem. All family’s members are impacted when the lack of adequate connectivity affects the ability to apply for a job, engage in online learning and pay bills. Langford reflects on the memory of driving past a school in the freezing weather and seeing people out front trying to access the school network for work opportunities, as well as the ability to do homework.

Community Approach Needed

Sadly, according to Langford, “Our solution remains hotspots, and it is an incredible frustration of mine because we know they are sometimes challenging for students to use based on the city’s signal strength.” A hotspot experience varies significantly by many factors: quality of the hotspot, the memory, the signal carrier, signal strength in the city. Unfortunately, the funding for connectivity options for students is primarily from the federal government, which does not support robust and sustainable connectivity solutions for the communities. At the onset of the pandemic, several CIOs in Oregon recently wrote a letter to their governor with their concerns about purchasing more hotspots and looking at the funding as an opportunity for the state to partner with providers and build a private LTE network. As noted by Langford, that will take time and has not gotten much traction from the state level. However, Langford is hopeful that due to significant data from the CoSN Home Internet Connectivity Study, the district will continue to improve accessibility for all. He reiterates that home connectivity solutions should be both educational and community-focused challenges tackled through a multi-agency approach.