BACKGROUND
The purpose of the Summer 2021 City of New Haven School Parent and Student Internet Connectivity (PSIC) Survey was to help describe community needs relating to technology and home internet service, especially those related to participation in remote learning. Although technology and internet access have always been important for parents and students in K-12 schools, the disruption caused by the COVID-19 pandemic has highlighted the importance of ensuring equitable access to online learning.

In 2021, the City of New Haven Economic Development Administration commissioned DataHaven to develop a pilot survey project to describe current perceptions among New Haven Public School parents using a combination of an electronic screener survey and live telephone interviews. The survey was fielded from July through September 2021, in two parts.

METHODS
In July 2021, the New Haven Public Schools distributed an electronic screener survey to a large list of parents and guardians of students who were enrolled in grades PreK through 12 in the 2020-2021 school year. This screener survey linked to an online form that asked respondents if they would be willing to participate in a more detailed telephone interview in return for an incentive, as well as a few other screening questions. A survey collector was made available in English and Spanish, and 487 valid responses were received from persons who said that they have children enrolled in New Haven Public Schools.

Of the 487 initial electronic responses, 262 (54%) indicated that they were willing to participate in a telephone interview. Sixty (60) potential telephone interviewees were selected from this list of 262 responses using a randomly-assigned number. Prior to
selection, the random number was weighted to adjust for an underrepresentation of respondents to the screener survey who lived in ZIP Code 06519. The final distribution of the selected potential interviewees included respondents from each area (36% from 06511, 24% from 06519, 18% from 06513, 16% from 06515, 6% from 06512) in approximate proportion to the total city population in those areas.

In August and September 2021, an interviewer contacted all 60 parents who had been selected for an interview. Each parent was contacted at least twice by email and at least once by phone, and offered a $20 electronic gift card if they chose to participate. Ultimately, twenty-nine of these parents (48%) were interviewed by telephone. Each phone survey took approximately 15 minutes and was conducted in English or Spanish. Parents were asked a range of questions, typically focusing on their oldest child during the 2020-2021 academic year, to gather further insight into their child’s remote learning experience during the 2020-2021 academic year. All interviews were anonymous and confidential.

RESULTS

Electronic Screener Survey

The electronic screener survey was primarily used to identify potential participants for the live in-depth telephone interviews. However, it contained a few questions about internet access. On the question, “Does your child participate in online learning?”, nearly all respondents (98%) said yes. On the question, “Does your student often have trouble accessing online learning due to internet connectivity problems?”, 353 respondents (72%) said yes and 132 (27%) said no.

The question “Are these issues having a negative impact on your student's achievement in school?” was open-ended, but concerns about internet connections and class participation were often reported within the written answers. For example, many respondents wrote that their students missed many classes due to poor quality internet service, were locked out of and therefore unable to complete assignments, were marked absent because they could not sign in, or were unable to understand the assignment or teacher due to dropped connection. Others reported that students were stressed or anxious about missing class. Some noted that they tried to have their service fixed or repaired but found it difficult. A minority of parents wrote that these issues were not having any major impact on their student’s performance, in several cases because these parents were able to contact teachers directly after class to obtain assistance.

Live Telephone Interviews

Live interviews were conducted with the aid of a semi-structured questionnaire. As noted above, 29 live interviews were completed by phone. Within these families, there were a total of 48 enrolled NHPS students across grades PreK through 12. Results from the live interviews are grouped thematically in the section below.
School Issued-Devices

“All kids need a good, working computer or device to do their work. It should always be an option. Our computer was completely outdated to be able to access the links she needed to. We had to jump through hoops to get a working computer.”

Of the 29 families that participated in live interviews, 18 (62%) were issued Chromebooks, 4 (14%) were issued laptops, 3 (10%) were issued tablets, and 2 (7%) were issued both a Chromebook and a laptop from their school. Two (2) of the families (7%) reported that they were not issued any devices. Nineteen (19) students (65%) also used a personal device to participate in remote schooling, most typically a smart phone.

Twelve (12) students (44%) out of the 27 students issued devices reported a problem with them which resulted in difficulties accessing remote learning and/or completing assignments. Hardware problems included the sound or camera not working, the device not holding its charge, the inability to access needed links and applications or ability to reliably save or turn in homework through the device or it being too slow.

Parent Support

Twenty (20) parents (69%) felt comfortable or mostly comfortable “using the computer to help your oldest child in NHPS with school work.” At the same time, 16 parents (70%) out of the 23 parents whose child’s school used Power School regularly “accessed Power School to check on [their] oldest child’s grades or attendance.” Seven (7) parents (30%) out of these 23 parents indicated they did not have the skills to do so, or never received the necessary information to access Power School.

Among those parents not comfortable with either using the computer to assist their children or accessing Power School, one parent suggested “either having a live session or recorded session to walk us through it, rather than emails.”

Accessing Remote Instruction

“All kids need a good, working computer or device to do their work. It should always be an option. Our computer was completely outdated to be able to access the links she needed to. We had to jump through hoops to get a working computer.”

All students typically accessed the internet through their home to do their remote learning, including accessing on line classes and completing assignments. Eight (8) parents (27.5%) reported that their student occasionally worked remotely outside of their own home due to unreliable internet access at the following types of additional locations: other relatives’ home, in the car using a phone, their local library, or a satellite learning center.
Internet Cost and Speed

Twenty-seven (27) of the interviewees were able to provide monthly payment information for their current internet service as of Fall 2021. The amount paid per month per family varied from $9.95 for Comcast Internet Essentials to $300 per month for bundled cable, internet and phone service. Seven (7) families (24%) paid $9.95 per month, 11 (38%) families paid between $50 and $85 a month, 6 (21%) families paid between $100 and $180 a month and 3 (10%) families paid between $250 and $300 a month. Many parents reported having paid more “to boost” their service or to get greater speeds. And almost all families reported that they were paying the maximum they could currently afford for internet service.

Internet Reliability

“Internet Essentials is not reliable. It’s awful. It’s too slow, not always accessible at different parts of house even though apartment is 600 square feet.”

“I’m paying for high speed and not getting it.”

“I have the fastest but still not good enough for 5 [people]. “

Eighteen (18) parents (62%) reported that they either did not have reliable internet and/or they had connectivity issues that interfered with their students participating in remote learning.

The amount parents paid for internet was not necessarily related to reliability of internet service. Six (6) of the 9 families paying more than $100 per month reported that their internet was too slow or not sufficiently reliable for their children to always participate remotely. And 5 of the 7 parents paying $9.95 reported their internet was reliable.

Finally, parents with multiple children almost always mentioned issues with internet speed and connectivity when multiple children, and in many cases, parents, needed to be online at the same time.
Students Ability to Access Classes and Complete Assignments

“We needed a parent dedicated to every time they were booted off.”

“All kids need a good, working computer or device to do their work. It should always be an option. Our computer was completely outdated to be able to access the links she needed to. Had to jump through hoops to get a working computer.”

“Sometimes my student was kicked out of the Google classroom 5 or 6 times.”

Twenty-three (23) parents (79%) reported that their child had issues accessing classes because of internet issues during the 2020-2021 academic year. Of these, 6 reported having issues nearly every day, 6 reported having issues once or twice per week, 7 reported having issues once or twice per month, and 2 reported having issues once or twice all year.

In addition, 7 (24%) parents reported their child had difficulty logging into the computer to access class at the correct start time.

Parents were asked to describe the specific internet issue(s) that impeded remote access. The most frequent complaints were that students “could not connect,” 12 (41%), the internet “dropped/froze/glitched or acted up,” 12 (41%), and the internet was “too slow,” 9 (31%). Many issues of clarity were also reported. Notably, even parents who indicated that their internet was “reliable” frequently described slow connection speeds that frustrated their children, or issues that arose when multiple users attempted to connect simultaneously.

18 parents (62%) also reported that their children had difficulty completing assignments most frequently due to the internet or, in 9 families (31%), faulty computers or computer components impeded students’ ability to complete their work.
Impacts on Student Achievement

“Shes had to do a lot of catch up due to a lot of faulty connections. It took 3 or 4 hours to get the basics of what was missed.”

“One of her teachers gave her a D- at the end of the year because of a technical failure which took down her morale. We never understood why. We tried to reach to the teacher and tried to get it resolved, but she wouldn’t return our email.”

“My son fell back a year. Some of the assignments he couldn’t complete. Make up day on Friday, but it was a lot of assignments to make up. It affected his math grade. He got logged out and when he logged back in, he had missed something. He struggled and got frustrated a lot.”

*My son was crying out of frustration. He said to me “Do they not know that we are good students and we are trying so hard?”*

Eighteen (62%) of parents interviewed believed that remote learning in general, and poor internet access and/or computer reliability specifically, negatively impacted their children’s achievement during the school year.

In addition to having more reliable internet and computers, parents’ suggestions for improving remote learning in general included teachers and schools having better communication with the parents, more guidance and instruction on how parents can help with students, and better tech support.

Parents also reported that their children’s teachers had connectivity issues during their classes. Most frequently students could not clearly hear or understand their teachers. Some noted that classes were also missed because teachers could not connect. Finally, 12 (41%) parents were concerned about their children’s teacher’s internet reliability and/or the internet connections of the school while students were in hybrid-remote learning models due to poor connectivity of too many users in the school being online at one time.

**DISCUSSION**

The approach used to conduct this survey has several strengths and limitations. The use of an electronic screener survey in English and Spanish to recruit parents and guardians for the live interviews is believed to be significantly more cost effective than other recruitment methods (such as random-digit dial), and was a recruitment tool that could easily be distributed through the New Haven Public Schools’ email list. However, this approach could limit the reach of the survey, particularly among parents with limited access to technology or language barriers.

Although respondents appeared to be representative of NHPS parents, results from this survey should not be used to generalize about the experiences of all NHPS students. It
is possible that parents or guardians with greater levels of concern about access to technology and remote learning were either more or less likely to complete the survey than the “typical” NHPS parent. It is also possible that individuals with more significant concerns about internet access or remote learning were either more or less likely to voice those concerns during open-ended or qualitative interviews.

Because the survey had a relatively small sample size, it is likely that some of the concerns among populations with special needs, families with limited English proficiency, or other barriers that may prevent them from contacting teachers or other school officials for assistance were not captured through this approach.

The fact that concerns about internet connectivity were similarly widespread among both the electronic screener survey responses as well as among the live interviews, and that there was not a great variation in the types of responses given, suggests that common themes would have emerged even if other, far more time-intensive methods, had been used to conduct this survey.

Although interviewees provided some recommendations for addressing community concerns, further conversations with parents, students, and technical experts can help validate the results of this survey and suggest additional action steps.

**CONTACT INFORMATION**

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DataHaven is a non-profit organization with a 25-year history of public service to Connecticut. Our mission is to empower people to create thriving communities by collecting and ensuring access to data on well-being, equity, and quality of life. DataHaven is a formal partner of the National Neighborhood Indicators Partnership of the Urban Institute in Washington, DC.