



Home Digital Access Data Collection:

Blueprint for State Education Leaders

In partnership with



THE COUNCIL OF CHIEF STATE SCHOOL OFFICERS

The Council of Chief State School Officers (CCSSO) is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, the Bureau of Indian Education and five U.S. extra-state jurisdictions. CCSSO provides leadership, advocacy, and technical assistance on major educational issues. The Council seeks member consensus on major educational issues and expresses their views to civic and professional organizations, federal agencies, Congress, and the public.

Restart & Recovery Home Digital Access Data Collection: Blueprint for State Education Leaders

COUNCIL OF CHIEF STATE SCHOOL OFFICERS

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INTRODUCTION

The COVID-19 pandemic has created a renewed urgency for closing the digital divide in America's education system. Schools had to quickly pivot to online learning, turning living rooms into classrooms for 55 million students¹ at the peak of the crisis. Without access to an Internet connection or dedicated learning device at home, millions of the most vulnerable students² were at risk of falling significantly behind during school closures. Closing this digital access gap has become a priority, as many local education agencies (LEAs) anticipate continued reliance on remote or blended learning delivery when school returns in the fall. Addressing this challenge will help our schools navigate the pandemic more effectively in the short-term and be a crucial long-term investment in ensuring all learners can access Internet connectivity and digital learning.

The first step in solving this pressing equity challenge is to conduct high-quality data collection to identify which students are impacted. The <u>Council of Chief State School Officers (CCSSO)</u> has partnered with the national nonprofit <u>EducationSuperHighway</u> on their <u>Digital Bridge K-12</u> project to develop a blueprint for how state leaders can facilitate this data collection. Special thanks to the <u>State Educational Technology Directors Association (SEDTA)</u>, the <u>U.S. Department of Education</u>, and the <u>Center for Democracy & Technology (CDT)</u> for providing guidance and input in an advisory capacity.

This document is intended to be a jumping-off point for state education agency (SEA) leaders. Whether your state has historically been collecting data on student home digital access or was forced to begin this challenge due to the pandemic, this blueprint will offer constructive guidance. Note that it is a living document that will be updated as we receive feedback from the community and continue to identify effective strategies and important considerations.

BACKGROUND AND CHALLENGES

When COVID-19 caused nationwide school closures in the spring of 2020, LEAs undertook incredible efforts to quickly transition to online learning. Many schools, recognizing that students without a device and Internet connectivity at home would be unable to participate, made a push to identify which learners needed additional supports. While some of these approaches effectively identified the need and enabled schools to deliver timely solutions, many LEAs encountered challenges like low survey response rates and inaccurate responses. Also, because there was limited coordination of these efforts across LEAs, the resulting data sets are inconsistent. Understanding these issues, SEAs now have the opportunity to provide guidance to school districts that will make home digital access data collection more effective and more consistent moving forward.

WHY THIS DATA COLLECTION IS CRITICAL

LEAs and SEAs need to move from understanding the estimated percentage of students who do not have adequate home digital access to understanding specifically which students do not have access, in order to connect those students to consistent, high-speed Internet.

Knowing which students lack home Internet access and/or a dedicated learning device enables LEAs to:

• Understand the impact that lack of home digital access has on learning outcomes

¹ Education Week (May, 15, 2020) Map: Coronavirus and School Closures

² EducationSuperHighway (2020) Digital Bridge K-12 Interactive Map: America's Unconnected Students

- Identify and call out the digital access gap as an educational equity issue
- Target resources to students in need of digital access
- Determine the most effective Internet connectivity solutions, making sure to engage with local community and business leadership for input and implementation of solutions
- Gain leverage when seeking funding to help close the gaps

This information will enable SEA's to:

- Understand the impact that lack of home digital access has on learning outcomes
- Advocate to state and federal government for funding to close the digital access gap
- Direct state resources, including funding, to LEAs
- Share guidance with LEAs on how to use state and federal funding to support home Internet connectivity projects (see Appendix 1)
- Engage local Internet Service Providers (ISPs) to develop and implement effective, replicable solutions (e.g., assisting LEAs with aggregated procurement strategies)
- Facilitate data sharing, with appropriate security safeguards, for organizations that can help to implement digital access gap solutions

The SEA's Role in Home Digital Access Data Collection

The SEA's role is to create a framework for consistent data collection across LEAs and guide LEAs on best-practice strategies. The SEA's primary functions are to:

- Establish common data elements
- Recommend data management best practices
- Communicate guidance on data collection strategies

Additionally, as with all student data collection activities, the SEA has both a legal obligation and an ethical mandate to ensure that the collection and sharing of student information do not compromise their privacy, safety, or well-being. Please refer to the Student Data Privacy Considerations section of this document for more detailed guidance.

SEA Action Plan - Priority Steps for Back to School

 Send a memo to LEAs emphasizing the continued importance and urgency of collecting students' digital home access data, and continue communicating guidance. Many states will want to simultaneously offer guidelines for LEAs on how to report this data to the SEA.

Memo Example: Indiana Department of Education (2020)

2. Work with the Student Information System (SIS) vendors in your state to incorporate the students' digital home access data elements recommended in this blueprint into their SIS software and state-level reporting. CCSSO is continuing to coordinate cross-state asks to the SIS community.

CCSSO Letter to SIS Vendors (2020)

3. Provide LEAs with resources to help them complete data collection.

Digital Bridge K-12: Home Access Needs Assessment Playbook

INITIAL DATA ELEMENTS AND STANDARDIZATION

Establishing a set of common elements for collecting data about student home digital access will help school districts understand which pieces of actionable information they should be gathering. It will also help ensure that this data can be aggregated at the state and national levels with confidence.

An initial set of data elements were identified in collaboration with SEAs, LEAs, and industry experts in mid-2020. By collecting the following information about every student, administrators will be able to identify (1) whether a student has access to Internet connectivity and/or a dedicated device at home and (2) whether that access is sufficient for high-quality online learning. Note: This recommended data framework is in the process of being aligned with the standards organizations.

These data elements were formally approved by Common Education Data Standards (CEDS) in May 2021:

Data Element	Definition
Primary Learning Device Away From School	The type of device the student uses most often to complete learning activities away from school
Primary Learning Device Access	An indication of whether the primary learning device is shared or not shared with another individual
Primary Learning Device Provider	The provider of the primary learning device
Internet Access In Residence	An indication of whether the student is able to access the internet in their primary place of residence
Barrier To Internet Access In Residence	An indication of the barrier to having internet access in the student's primary place of residence
Internet Access Type In Residence	The primary type of internet service used in the student's primary place of residence
Internet Performance In Residence	An indication of whether the student can complete the full range of learning

Additional Data Element detail, including element definition, format, technical name, and option set information can be found in Appendix 2.

FUTURE DATA ELEMENTS AND STANDARDIZATION

Additional digital equity data elements will continue to be identified by SEAs, LEAs, and industry experts. CCSSO will take the lead on working with existing standards bodies to facilitate the community development, vetting, and release of all additional digital equity data standards. Work to standardize the next round of data elements has already begun with CEDS, and is anticipated to be incorporated into the data standard by December 2021.

DATA MANAGEMENT BEST PRACTICES

The home digital access data LEAs collect should be stored in a common repository that is secure, easy to update, can produce customizable reports and is readily accessible to education leaders. This data would be best captured in the SIS, which would allow for seamless aggregating and reporting back to the SEA, and integration across other student data points (e.g., demographic and academic data). This could be valuable for gleaning deeper insights into which populations are most affected as well as impact on learning outcomes.

Opportunity to Engage with SIS Vendors

The spring 2020 COVID-19 school closures were unforeseeable and have necessitated short-order data collection. Moreover, LEAs are now facing aggressive timelines and will likely bump up against SIS limitations. Because the data fields recommended above may not be built into all systems, the LEAs may not be able to utilize their SIS for managing this data for the upcoming school year. In these instances, they may need to rely on ad-hoc tools like spreadsheets. SEAs are encouraged to support LEAs by engaging with the SIS vendor community to underscore the continued importance of this issue and encourage them to make the needed adjustments for the 2021-2022 school year. Some states have already taken the lead on this, and CCSSO continues to coordinate a cross-state effort to make a collective "ask" of the SIS vendor community that has resulted in many leading SIS vendors willfully incorporating these data elements into their base product. The Ed-Fi Alliance has also been working closely with their community to develop a working draft of Ed-Fi's Digital Equity. Collection, providing a responsive option that some vendors are proceeding to incorporate with the understanding that a robust data standard is under development.

PROVIDING GUIDANCE FOR LEAS ON DATA COLLECTION STRATEGIES

SEAs should promote the following best practices for schools:

- Embed data collection into existing processes. Determining students' home digital access status is a priority for the 2021-22 school year, and it will continue to be a concern for schools until equitable digital access is ubiquitous. To ensure comprehensive and consistent data collection, LEAs are encouraged to integrate the data-collection process into existing operations (like registration and enrollment).
- Infer access gaps from student engagement. If an LEA's registration timeline does not align with the start of school, the LEA should leverage the data already available and analyze indicators of distance-learning engagement to infer which students may not have home digital access. For example, schools could identify those students who have not "attended" online learning or have not logged on to core distance-learning applications. Some schools also could analyze Internet traffic on school-provided, take-home devices to infer which students lack home connectivity.

• **Conduct targeted outreach.** After prioritizing segments of students who may not have digital access, LEAs are encouraged to conduct a targeted survey of, and direct outreach campaign to, impacted families.

EducationSuperHighway's <u>Home Access Needs Assessment Playbook</u> contains tools and resources to support school districts in these efforts. The playbook, based on best practices gathered from LEAs across the country, includes:

- A data collection tool
- A question bank for school districts (aligned with data elements outlined in this blueprint)
- Call scripts and email templates (available in English or Spanish)
- Case studies of LEAs that have successfully collected home digital access data
- A password-protected mapping tool that enables LEAs to develop strategic solutions, by uploading their home digital access data and overlaying available ISP options sourced from FCC Form 477 data to more accurately locate and resolve the access gaps.

How one SEA is using these principles to overcome the home digital access data challenge

Bridgeport Community Schools know that about 25% of their students do not have access to the Internet, but they can't identify which students they are with confidence. To support their teachers in planning to deliver solid instruction in the coming year—whether in person or remotely—the district leadership knows they need a "full-court press" on collecting this data for each student. This is also vital if they want to leverage their CARES Act funding and resources from local philanthropic and community supporters to ensure an optimal learning infrastructure. The district leadership team has decided on a three-prong strategy to obtain and maintain this data for the long-term:

- 1. Enrollment / Registration 2020-2021 campaign
- 2. Follow-up phone campaign
- 3. Collaboration with SIS provider for longer-term, efficient data management, and reporting

Using the data fields established by this blueprint, Bridgeport has identified how to use its registration process to identify home digital access gaps. Trained school volunteers will follow up after fall registration to seek clarification or to track down data missed during the registration process, using the phone scripts provided in the playbook. These strategies incorporate language developed by the district communications department explaining why this data is needed and affirming the district's commitment to protecting the students' data.

STUDENT DATA PRIVACY CONSIDERATIONS

SEAs have a legal obligation to protect sensitive student information and an ethical mandate to ensure that any collection and sharing of students' information does not compromise their privacy, safety, or well-being. When collecting data on digital access, SEAs and LEAs need to consider:

- Data minimization: Collect each piece of data intentionally and tie it clearly to an intended use.
- **Legal compliance:** Keep in mind that this is Personally Identifiable Information (PII), so follow all protocols required by the Protection of Pupil Rights Amendment (<u>PPRA</u>), Family Education Rights and Privacy Act (<u>FERPA</u>), and any of the 130 state student privacy laws that are pertinent. (see <u>Appendix 3</u>)
- Restrictions on access: Specify that access to this data will be limited to only those who need it.
- **Secure collection**: States might opt for collecting this information via the SIS, manually (e.g., via a spreadsheet), or through a third-party survey vendor. However, any method used must be secure (e.g., not via email). If working with a third party, it will be key to have appropriate agreements in place which utilize a Family Educational Rights and Privacy (FERPA) exception.

Federal and state legal requirements will inform data sharing, as well. Sharing students' PII with Internet Service Providers (e.g., for procurement purposes), must be based on parental consent or a FERPA exception. In addition to legal compliance, PII-protective best practices for data sharing entail:

- Restrictions on use: No student data should be used for marketing purposes, now or later.
- **Retention and deletion**: A finite period should be specified during which the data may be maintained, after which it must be deleted through an agreed-upon method.
- Written agreement: Data sharing with SEAs and with Internet Service Providers should be based on a written agreement detailing use, access, and redisclosure restrictions; security requirements; and data retention and deletion requirements. The U.S. Department of Education has provided guidance and a checklist for drafting such agreements. (see Appendix 4)
- **Secure transfer**: Similar to the security requirements for data collection, data to be shared must be transferred securely–for instance, by secure FTP or similar protocols.

LESSONS LEARNED AND BEST PRACTICES

As SEAs began leading home digital access data collection efforts at a state level, several lessons learned and best practices emerged. Acknowledging that there are many inherent differences between SEAs and the nature of relationships they have with other state agencies and their LEAs, the following Lessons Learned and Best Practices may not apply to every SEA and mileage will vary. However, this does give a broad sense for some of the most pertinent issues encountered and successful activities executed to promote digital equity during the height of the COVID-19 pandemic.

Lessons Learned, as provided by SEAs:

- An adaptive approach works best. This is a very dynamic space, with many entities interested in participating and contributing to its success. As such, use an Agile approach that is vision-based, easy to explain, and adaptable to changes in the Digital Learning ecosystem.
- Messaging "the why" is critical. If data collection is not a mandate in your state, then you will need to take special care to identify and promote why collecting this information is of importance to LEAs and schools. In many cases, leveraging approaches and materials used by other SEAs with the help of outside

vendors - has proven effective.

- **Digital Equity is bigger than connectivity and devices.** Addressing the digital learning gap requires more than securing funding for reliable internet connectivity and devices for the upcoming school year. As unforeseen issues emerge, document them and factor them into long-term sustainability assessments.
- **Relationships matter.** Statewide change starts at the local level. Be willing to empathize with local administrators and their needs as you construct technical solutions. Increase communication with tech coordinators at local education service providers to drive lasting change.
- Opportunities to engage SIS Vendors persist. By and large, LEAs and schools took a very pragmatic approach to collecting Digital Equity data at the student level to address the immediate needs of the 2020/2021 school year. However, much of the data that was collected was not stored in the SIS. Going forward, formalize and operationalize this data collection in conjunction with SIS capabilities.

Best Practices, as provided by SEAs:

- Leverage District-Driven Pilots. Start small with data collection efforts, utilizing a cohort of three-to-five districts that are representative of your state's demographic profile. Work out the kinks there before operationalizing at a statewide level.
- Intentionally Collect Data as Future Research Inputs. A tremendous amount of research will be conducted on COVID-19's impact on student outcomes. Identify, capture, and store digital equity-related data as critical inputs to future research efforts.
- **Provide Compelling Visuals and Maps.** Many interested stakeholders gravitate to geographic visual representations of the Digital Learning Gap's current state, along with progress made to date. Invest in the ability to show a visual or a map of progress made and anticipated progress to be gained.
- **Keep an Eye on Sustainability and the Future.** Incorporate sustainability of efforts, including annualized financial costs and anticipated resources required, to maintain the collection and storage of current and future Digital Equity data elements. As more stakeholders come to rely on this information going forward, you will need to ensure that the data collected and stored is of the highest standards.
- **Define Data Uses.** Work with policymakers and technical leaders to determine the best and most accurate way to communicate how data will be used at a student vs. district vs. state level in your state. Student and family privacy is a particular area of sensitivity.

Have feedback on this document? Please contact Kimberly Gondwe at kimberly.gondwe@ccsso.org

APPENDIX 1: RELEVANT FEDERAL FUNDING RESOURCES

- Office of Educational Technology, Funding Digital Learning
- Dear Colleague Letter: Federal Funding for Technology

This letter provides some examples of how funds under Titles I through IV of the ESEA, as amended by the ESSA, and the Individuals with Disabilities Education Act (IDEA), may support the use of technology to improve instruction and student outcomes.

- Funding specifically for K-12 home connectivity
 - E-rate: \$7.17 billion in funding for home connectivity as part of the American Rescue Plan (ARP)
 - FCC's Report & Order released to public on May 11
 - The 45 day application window for purchases made between July 1, 2021 and June 30, 2022 is expected to open in mid to late June
- Funding for K-12 that can be used for home connectivity
 - ESSER II: \$54 billion in flexible spending, (US DOE fact sheet)
 - GEER II: \$4 billion in flexible spending for Governors (US DOE fact sheet)
 - **Title IV, Part A**: \$1.2 billion that can fund device and connectivity purchases, <u>Letter from US DOE</u> waiving the cap in December 2020
 - ESSER III: \$122 billion in flexible spending for K-12, (US DOE fact sheet)
- Funding to make broadband more affordable for eligible households
 - Emergency Broadband Benefit Program: \$3.2 billion available through this temporary program to help eligible households pay for Internet service during the pandemic (US DOE toolkit)
- Funding to expand broadband infrastructure in rural areas, Tribal lands, and minority communities
 - ARP: \$350 billion in state and local funding that can be used for broadband
 - NTIA Tribal Broadband Grant Program: \$1B; NTIA Minority Broadband Grant Program: \$285M

APPENDIX 2: CEDS-APPROVED DIGITAL EQUITY DATA ELEMENT DETAIL

Element Name: Primary Learning Device Away From School

Element Definition: The type of device the student uses most often to complete learning activities away from school.

Element Format: Option Set

Element Technical Name: PrimaryLearningDeviceAwayFromSchool

Element Usage Note: When asking for this information on a parent or student survey, the question could be phrased like this: "What device does the student most often use to complete learning activities away from school?"

Option Description	Option Definition	Option Code
Desktop Computer	A desktop computer is the type of device the student uses most often to complete learning activities away from school.	DesktopComputer
Laptop Computer	A Laptop Computer is the type of device the student uses most often to complete learning activities away from school.	LaptopComputer
Tablet	A Tablet is the type of device the student uses most often to complete learning activities away from school.	Tablet
Chromebook	A Chromebook is the type of device the student uses most often to complete learning activities away from school.	Chromebook
Smartphone	A Smartphone is the type of device the student uses most often to complete learning activities away from school.	Smartphone
None	There is not a device the student uses to complete learning activities away from school.	None
Other	The type of device the student uses most often to complete learning activities away from school is not yet defined.	Other

Element Name: Primary Learning Device Access

Element Definition: An indication of whether the primary learning device is shared or not shared with another individual

Element Format: Option Set

Element Technical Name: PrimaryLearningDeviceAccess

Element Usage Note: When asking for this information on a parent or student survey, the question could be phrased like this: "Is the student's primary learning device shared with anyone else?"

Option Description	Option Definition	Option Code
Shared	The primary learning device is shared with another individual.	Shared
Not Shared	The primary learning device is not shared with another individual.	Not Shared
Unknown	It is not known whether the primary learning device is shared with another individual.	Unknown

Element Name: Primary Learning Device Provider

Element Definition: The provider of the primary learning device.

Element Format: Option Set

Element Technical Name: PrimaryLearningDeviceProvider

Element Usage Note: When asking for this information on a parent or student survey, the question could be phrased like this: "Who provided the primary learning device to the student?"

Option Set Information (If Applicable)

Option Description	Option Definition	Option Code
Personal	The provider of the primary learning device is the student or guardian.	Personal
School	The provider of the primary learning device is the school.	School
Other	The provider of the primary learning device is not yet defined.	Other

Element Name: Internet Access In Residence

Element Definition: An indication of whether the student is able to access the internet in their primary place of residence.

Element Name: Internet Access In Residence

Element Definition: An indication of whether the student is able to access the internet in their primary place of residence.

Element Format: Option Set

Element Technical Name: InternetAccessInResidence

Option Description	Option Definition	Option Code
Yes	The student is able to access the internet in their primary place of residence.	Yes
No	The student is not able access the internet in their primary place of residence.	No

Element Name: Barrier To Internet Access In Residence

Element Definition: An indication of the barrier to having internet access in the student's primary place of residence.

Element Format: Option Set

Element Technical Name: BarrierToInternetAccessInResidence

Element Usage Note: This element is used in combination with the element "Internet Access in Residence." When asking for this information on a parent or student survey, the question could be phrased like this: "If the student is unable to access internet in their primary place of residence, why not?"

Option Description	Option Definition	Option Code
Not Available	The student cannot access the internet in their primary place of residence because internet service is not available.	NotAvailable

Option Description	Option Definition	Option Code
Not Affordable	The student cannot access the internet in their primary place of residence because internet service is not affordable.	NotAffordable
Not Desired	The student cannot access the internet in their primary place of residence because the parent or guardian chooses not to subscribe to internet service.	NotDesired
Other	The reason why a student cannot access the internet in their primary place of residence is not yet defined.	Other

Element Name: Internet Access Type In Residence

Element Definition: The primary type of internet service used in the student's primary place of residence.

Element Format: Option Set

Element Technical Name: InternetAccessTypeInResidence

Element Usage Note: When asking for this information on a parent or student survey, the question could be phrased like this: "What is the primary type of internet service used in the student's primary place of residence?"

Option Description	Option Definition	Option Code
Residential Broadband	The type of internet service used in the student's primary place of residence is residential broadband.	Residential Broadband
Cellular Network	The type of internet service used in the student's primary place of residence is a cellular network that creates a hot spot using a cell phone for additional device access or access to the internet is only available through a cellular device.	CellularNetwork

Option Description	Option Definition	Option Code
Residential Broadband	The type of internet service used in the student's primary place of residence is residential broadband.	Residential Broadband
Cellular Network	The type of internet service used in the student's primary place of residence is a cellular network that creates a hot spot using a cell phone for additional device access or access to the internet is only available through a cellular device.	CellularNetwork
Hot Spot	The type of internet service used in the student's primary place of residence is a standalone hot spot device that is not a cell phone that allows for additional device access.	HotSpot
Community Provided Wi-Fi	The type of internet service used in the student's primary place of residence is community provided Wi-Fi.	CommunityProvidedWi-Fi
Satellite	The type of internet service used in the student's primary place of residence is satellite.	Satellite
Dial-up	The type of internet service used in the student's primary place of residence is dial-up.	Dialup

Element Name: Internet Performance In Residence

Element Definition: An indication of whether the student can complete the full range of learning activities, including video streaming and assignment upload, without interruptions caused by poor internet performance in their primary place of residence.

Element Format: Option Set

Element Technical Name: InternetPerformanceInResidence

Element Usage Note: When asking for this information on a parent or student survey, the question could be phrased like this: "Can the student complete learning activities such as streaming a video and uploading assignments without interruptions caused by poor internet performance?"

Option Description	Option Definition	Option Code
Yes	The student experiences very few or no interruptions in learning activities caused by poor internet performance in their primary place of residence.	Yes
Sometimes	The student regularly experiences interruptions in learning activities caused by poor internet performance in their primary place of residence.	Sometimes
No	The student is unable to complete learning activities due to poor internet performance in their primary place of residence.	No

APPENDIX 3: DATA USE AGREEMENT BETWEEN SEA AND LEA

• Example from Wisconsin Department of Public Instruction

APPENDIX 4: DATA USE AGREEMENT BETWEEN SEA AND VENDOR

• Example from Wisconsin Department of Public Instruction



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