



OCTOBER 2021

## How States Measure Digital Equity: Current and Proposed Benchmarks

**“You cannot fix a problem you cannot measure.”**

This adage rings true, yet when it comes to the digital divide – the space defining students equipped with a device and adequate connectivity for learning and those without – remains a lot of guesswork. Many districts know which students have received school-issued devices, but among those who have not, leaders may not be sure which students have their own computer – or one shared among numerous parents and siblings – to complete homework assignments and take advantage of anytime, anywhere learning

opportunities. Even fewer districts provide home Internet access for students and so can only guess at which ones have the connectivity necessary to do their homework; benefit from apps that personalize learning; and participate in online, project-based work with their peers. At the local and state level, some data collection takes place around access to devices and broadband, but little alignment across these collections exists to paint an accurate picture of how and where digital equity gaps persist nationwide.

These issues were important long before the shift to remote learning necessitated by the COVID-19 pandemic. Even with the return to in-person learning, the widespread adoption of personalized learning tools and approaches has made digital equity central to broader discussions of educational equity. Which students have devices? How many are under-connected, depending on a parent’s mobile phone or slow Internet connection to complete their schoolwork and learn alongside their peers? And how many parents in our country cannot even purchase broadband because of a lack of connectivity options?

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Much work lies ahead to solve these challenges, and we can begin by developing common measures. This call to action has taken on even more urgency given the unprecedented federal relief funding to schools across the country to close the equity gap. These investments demand uniform standards of measurement to assess impact and return on investment.

For these reasons, Dell Technologies and SETDA collaborated to assess states' current measurement tools and approaches concerning digital equity. This report provides takeaways from the responses of state leaders and strongly encourages the adoption of a common framework for gathering local device and connectivity measures. Closing the digital divide requires committed teamwork among local and state leaders, private telecommunications carriers, families and communities. And the first step to ensure the targeting of solutions where we most need them is to have uniform data and collection practices across every state.

## PROJECT BACKGROUND

All students and teachers need devices and broadband for learning, especially with the rapid expansion of technology during the COVID-19 outbreak. Early in the pandemic, most districts worked to identify students in need of a device and home broadband access through surveys and direct outreach. In turn, states gathered data from their districts. The design — or mere existence — of such digital equity data sets varies across states based on the timing of their releases and data elements included.



In December 2020 through January 2021, SETDA and Dell Technologies designed and shared a survey to understand better the data that states have captured related to digital equity. Thirty-four (34) states and the territory of Guam responded.

Questions on the survey focused on data collected during the 2020 – 21 school year by state education agencies (SEAs). The suggested data elements released by the Council of Chief State School Officers (CCSSO) served as the baseline for comparing the data that individual states collect.

## KEY FINDINGS

### NO UNIFORM DATA-GATHERING PROCESS

Among the respondents, 68 percent collected data of any type, with 23 SEAs gathering information about device access and 26 asking for data about home broadband. Only six of the responding states *required* that districts provide this data. Three quarters of states report a high (70% or higher) response rate to data collections.

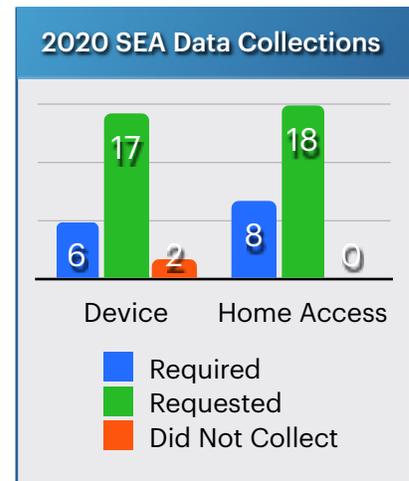
The lack of universal reporting does not reflect a desire of SEAs to collect this information. Respondents expressed a variety of hurdles that vie against data collection, including legislative approval, agency capacity, infrastructure to store the data, and concerns over privacy and data security.

The good news is that we will likely see more state-level data collections in the future. More than half of SEAs have a timeline for collecting data, and another quarter plan to collect it but have not set specific deadlines. Of concern, 26 percent still have no plans to collect connectivity data.

### VARYING DATA ELEMENTS ACROSS STATE COLLECTIONS

Most SEAs did not use the CCSSO national standard to create their data collection tool. Most developed their collection instruments at the same time that CCSSO was designing its standard; some states already had a standard collection even before the pandemic. Although many states indicate that they plan to adopt the national (CCSSO) standard, most will continue using their state-specific questions. This decision may relate to the fact that the CCSSO created its data collection standard early in the pandemic. Afterward, as school closures continued, states identified and included additional information needed to make decisions around equitable access. These supplemental data elements fall into several categories:

- Devices: Age, replacement cycle, and appropriateness to learning needs
- Internet Access: Data caps, upload and download speeds, and ability to support remote and blended learning models



## RECOMMENDATIONS

The design and use of data collections that capture necessary and actionable information can be complicated and require the input of all interested parties. State leaders responding to the survey identified several areas of change necessary to develop a collection instrument and process to gauge access to technology for learning:

- **Question Standards:** Uniformity of questions and response options, preferably leveraging the CCSSO instrument.
- **Process Standards:** More consistent and frequent methods for collecting the data.
- **Interoperability:** Ability to collect data aligned with the CCSSO standards into commonly used student information system (SIS) platforms, which serve as the longitudinal system of record in K – 12 schools. Many SEAs collect data directly from district SIS data stores or request it in the form of standard SIS reports, so having uniformity across SIS platforms should lead to uniformity in state reporting.
- **Verification:** Basic collection of numbers do not tell the whole story. For example, state leaders indicate that almost all reporting districts state that they are at or near a one-to-one ratio of devices to students. However, closer analysis reveals a smaller number of students who can take home school-issued devices. Districts' ability to provide devices for every student depends on leveraging parent or home devices, using devices that typically remain in school, purchasing large numbers of devices, and keeping older devices in the fleet.
- **Application to Learning:** States need greater insights into the data and its context to understand its impact on learning.
- **Advocacy:** Leaders need clear messaging to help lawmakers and education leaders understand the importance of collecting uniform equity data. Such decision makers need to see the value of a common collection for benchmarking and taking action to eliminate gaps in educational opportunity.



## LEVERAGE EXISTING EXAMPLES

State and district sovereignty in education remains strong. Nevertheless, SEAs can review and consider adopting effective practices from their peers. Combined here are examples of ways that different SEAs leveraged digital equity data collections as part of a number of related efforts:

- Learning readiness ([Arkansas](#) and [Kentucky](#))
- School reopening ([Louisiana](#))
- Existing, annual process ([North Carolina](#), [Vermont](#), and [Wisconsin](#))
- Specific data collection and reporting during the pandemic ([Connecticut](#), [Illinois](#), [New York](#))



## RESOURCES

- [Digital Equity Survey Questions](#)
- [Digital Equity Survey Results](#)

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**DELL**Technologies

## SURVEY QUESTIONS

### SETDA State Survey Questions: Equitable Access

Given the shift to remote learning this year, SETDA has developed a survey to identify how state leaders are collecting information about digital equity (i.e., availability of computers and Internet for students). Reporting that comes out of this work will directly support your efforts to advocate for universal access for learners, but first we need your help.

Directions: Please identify the individual best equipped to respond to the survey and have that person submit the form. This small investment of time from you and your colleagues will prove essential in the establishing uniform, national data-collection standards that help identify gaps in availability. Equity of access to technology for all learners remains a foundational concern of SETDA's members and partners, and we thank you in advance for contributing to this important work.

Please complete the form below to share information about your state's current and planned data collection pertaining to student access to technology (devices and broadband).

For some items below, refer to [CCSSO Data Collection Recommendations](#)

**Choose your state: \***

**Contact (person completing survey) \***

First Name      Last Name

**Contact Title \***

**Contact Email \***

example@example.com

**Did a regional center or other organization in your state collect multi-district data in 2020?**

Yes

No

Unsure

**To conduct a new data collection (e.g., student device and connectivity), what levels of approval does your state require (check all that apply)?**

State law (new or revised)

State board of education

SEA

**Did your State Education Agency (SEA) collect data on devices or home access in 2020? \***

Yes

No

**When the SEA data was collected, was it:**

Required

Requested

Did not collect

Device

Home Access

**When was the most recent 2020 data collection?**

**What was the approximate response rate of the latest 2020 collection?**

**Will the planned data elements be aligned to CCSSO Recommendations? (linked at top)**

	Used CCSSO language	Used SEA specific questions/responses	Did not collect
Digital Device			
Device Access			
Internet Access in Residence			
Internet Access Type in Residence			
Internet Performance			

**What additional SEA Data Elements were collected? (Check those that apply, if Other, please list separated by commas)**

- Age of device
- Data caps
- Upload and download speeds

**Please share the URL of the data collection analysis:**

Paste link

**When do you next plan to collect data? \***

2021

2022

Date being determined

No plan at this time

**What time of year do you plan to collect the data (check all that apply)?**

- Winter (Dec-Feb)
- Spring (March-May)
- Summer (June-August)
- Fall (Sept-Nov)

**How many data reporting times per year do you anticipate?**

**How will the planned data elements be aligned to CCSSO Recommendations? (linked at top)**

	Use CCSSO language	Use SEA specific questions/responses	Do not plan to collect
Digital Device			
Device Access			
Internet Access in Residence			
Internet Access Type in Residence			
Internet Performance			

**What additional SEA Data Elements will be collected? (Check those that apply, if Other, please list separated by commas)**

- Age of device
- Data caps
- Upload and download speeds

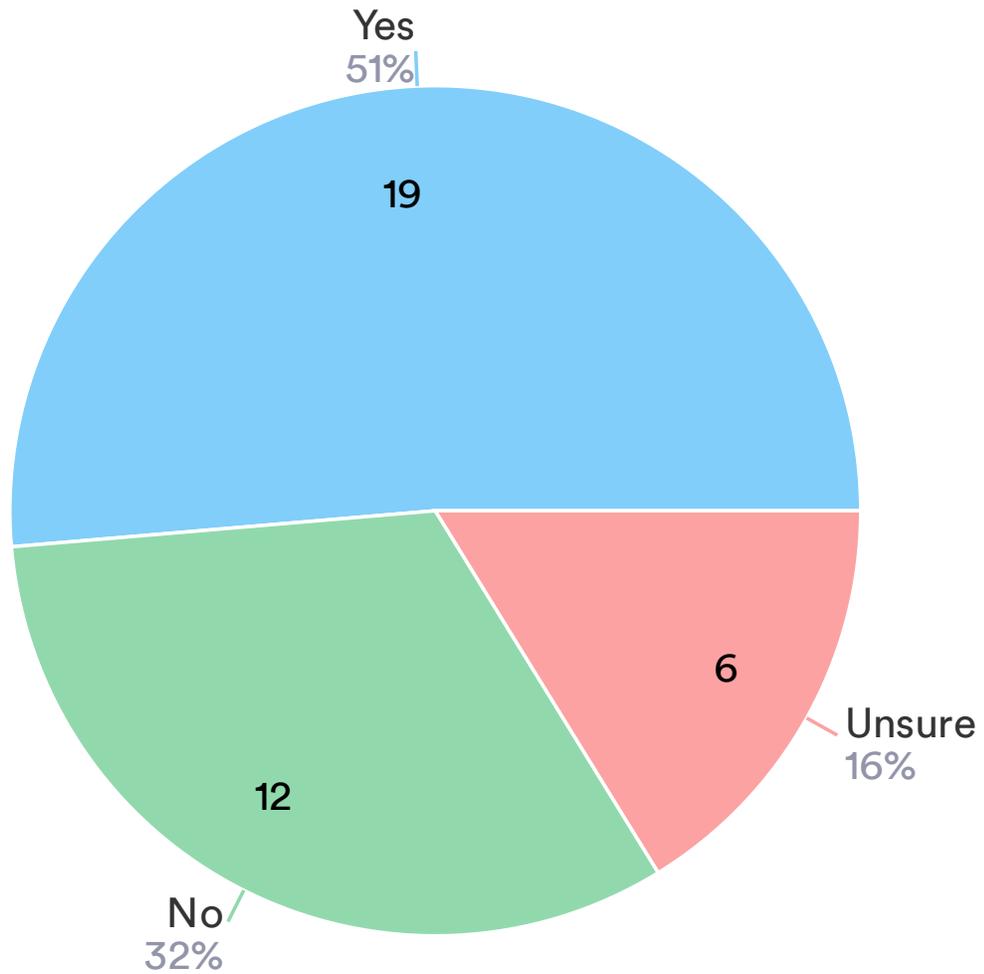
**What is needed for the data collection to be more useful?**

**What additional comments or clarifications do you have on information provided?**

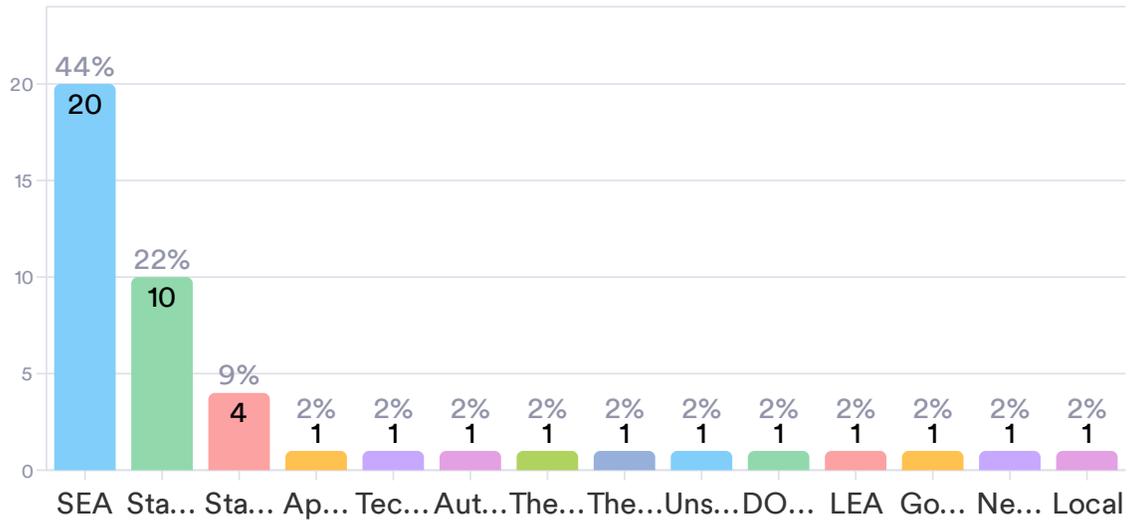
**If you have any tools, materials, or protocols related to the collection or use of digital equity data, please share below.**

SURVEY DATA

Did a regional center or other organization in your state collect multi-district data in 2020?

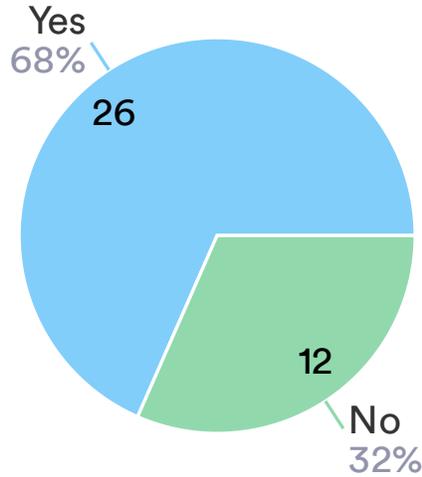


To conduct a new data collection (e.g., student device and connectivity), what levels of approval does your state require (check all that apply)?

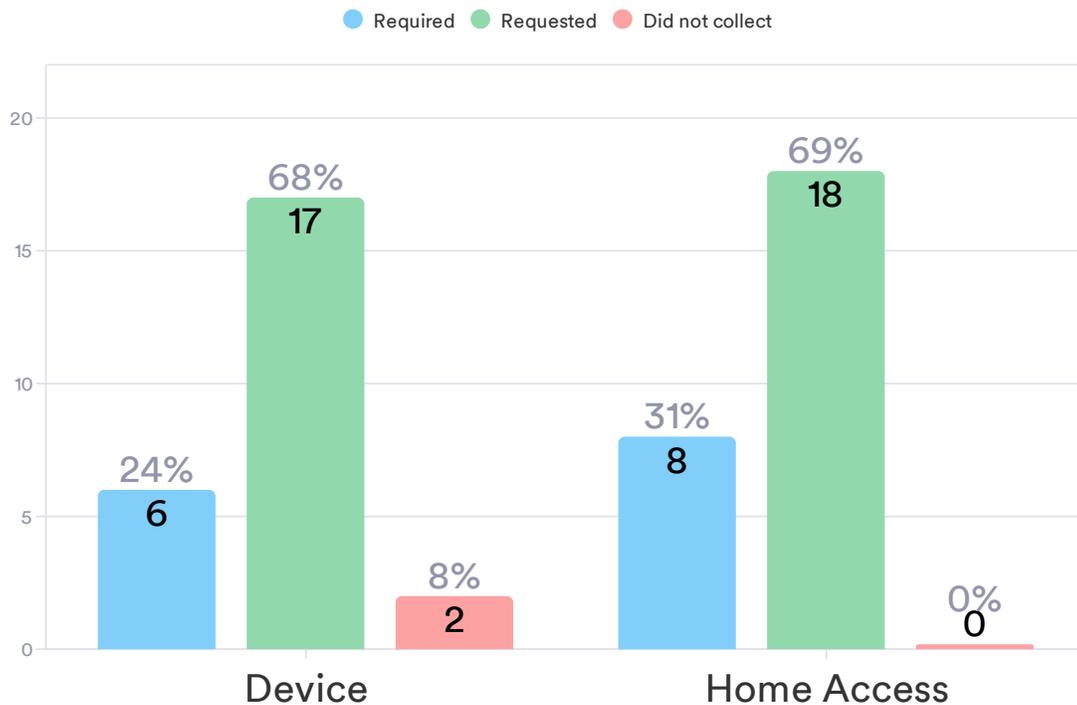


Data	Response	%
SEA	20	44%
State law (new or revised)	10	22%
State board of education	4	9%
Approval from the Education Data Manager and ...	1	2%
Technology committee review	1	2%
Authorized by K-12 CIO	1	2%
There are no laws or statutes directly prohibitin...	1	2%
The agency can commission collection or reque...	1	2%
Unsure	1	2%
DOE and Gov. Office work together	1	2%
LEA	1	2%
Governor's office	1	2%
New data collections must be required by state ...	1	2%
Local	1	2%

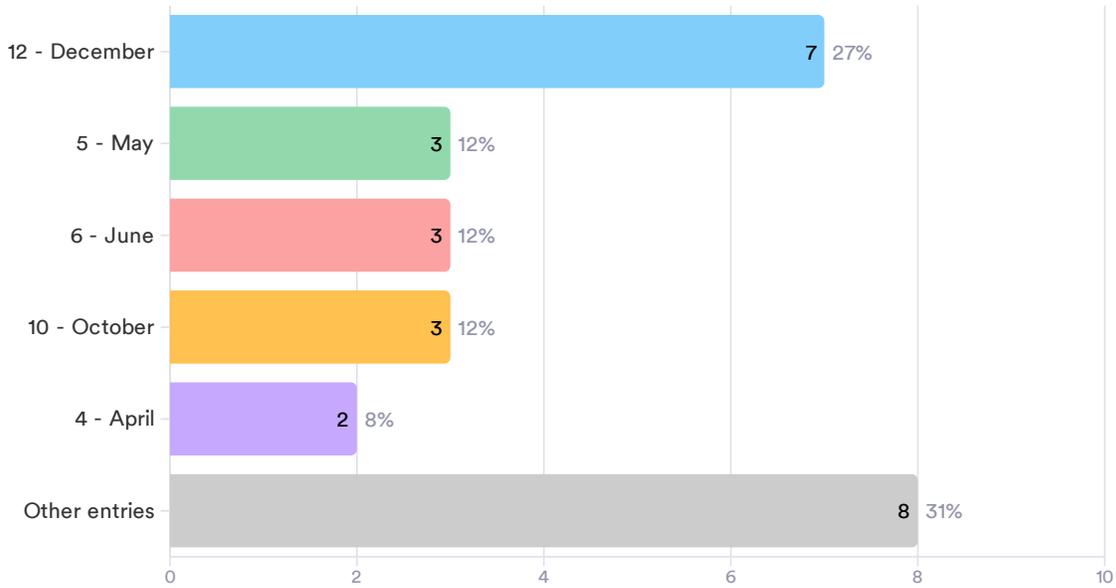
### Did your State Education Agency (SEA) collect data on devices or home access in 2020?



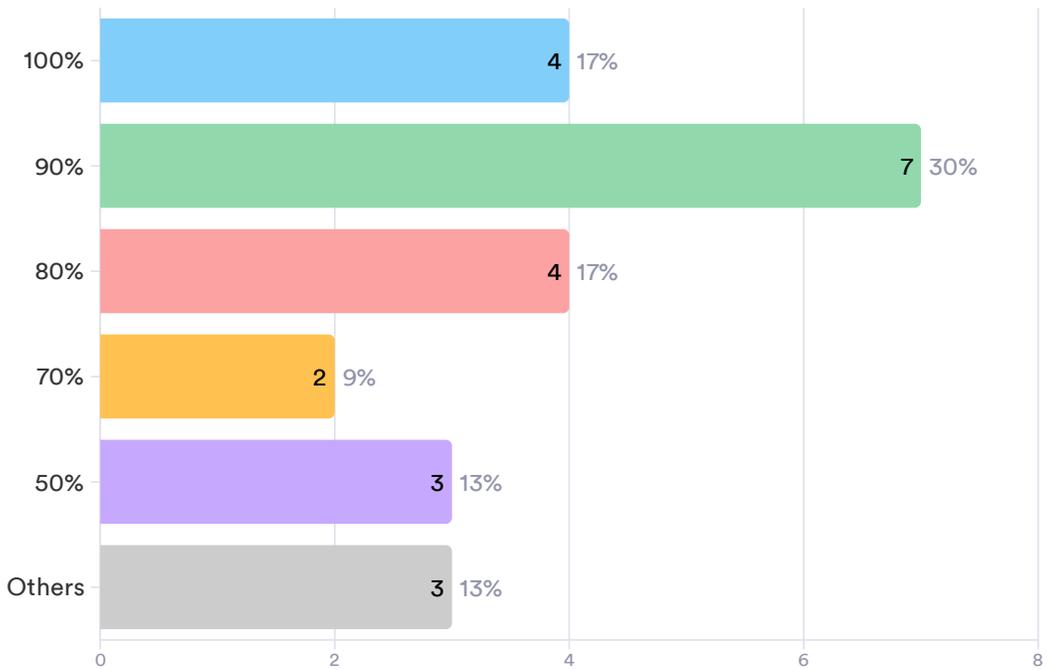
### When the SEA data was collected, was it:



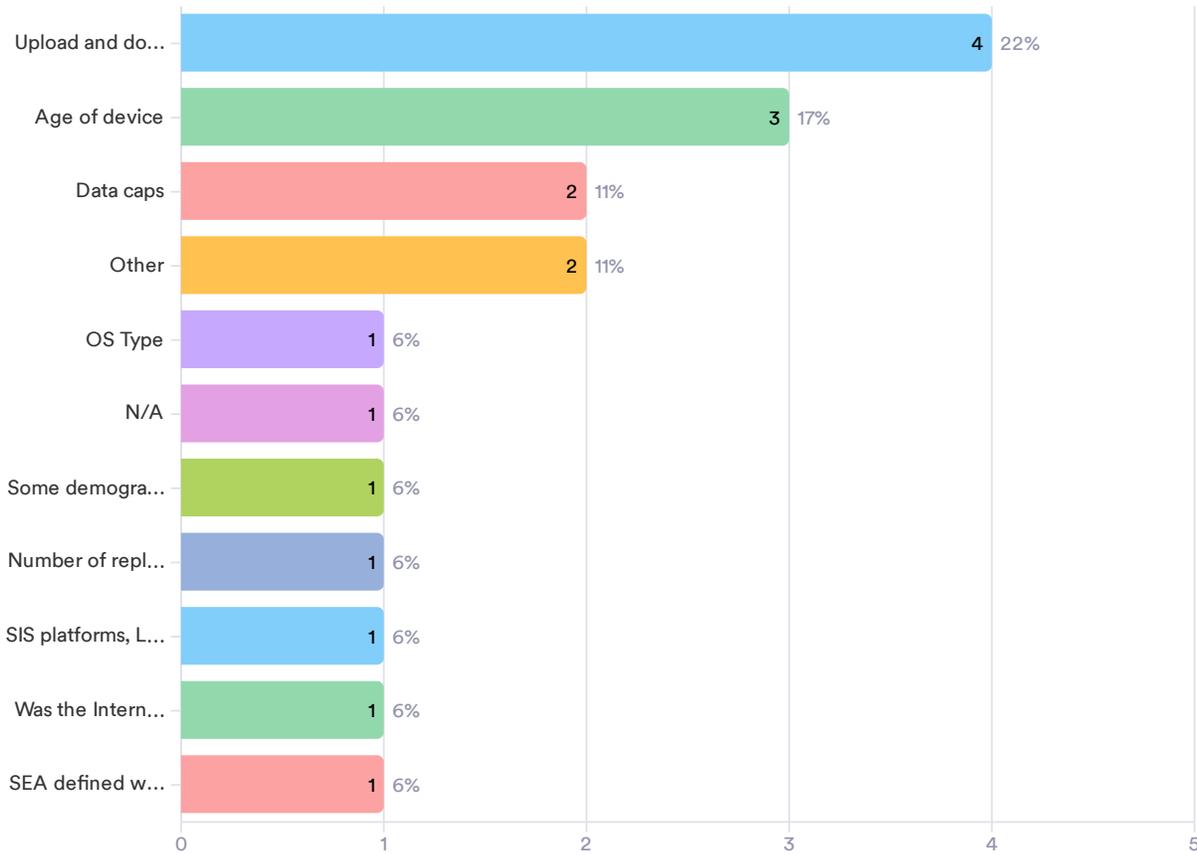
When was the most recent 2020 data collection?



What was the approximate response rate of the latest 2020 collection?

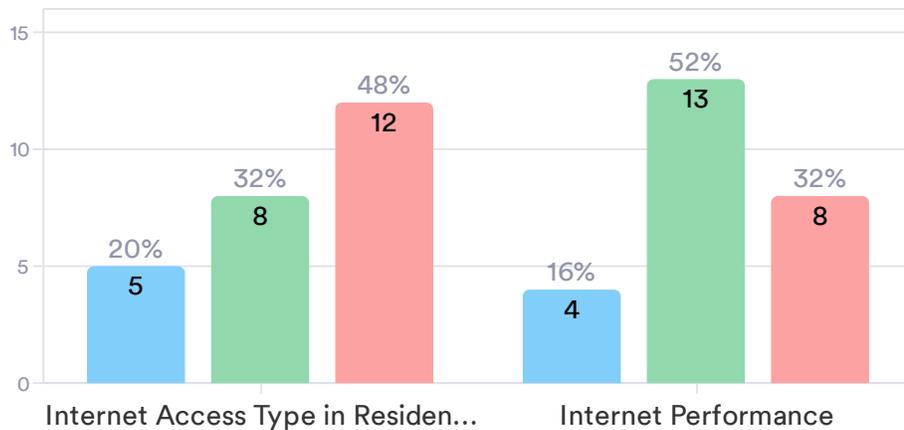
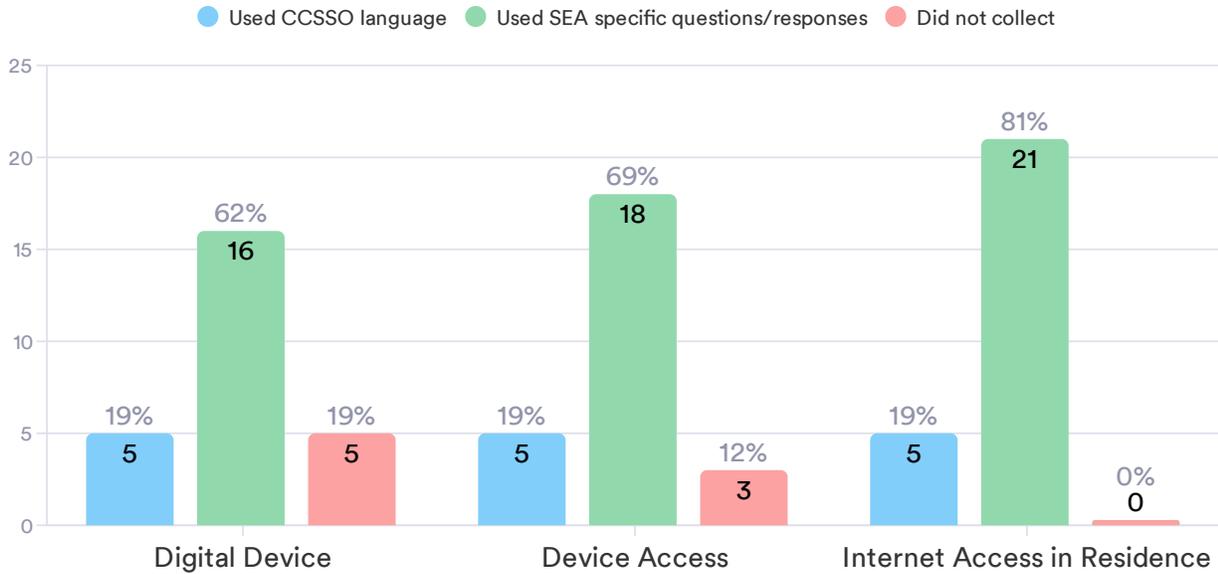


What additional SEA Data Elements were collected? (Check those that apply, if Other, please list separated by commas)

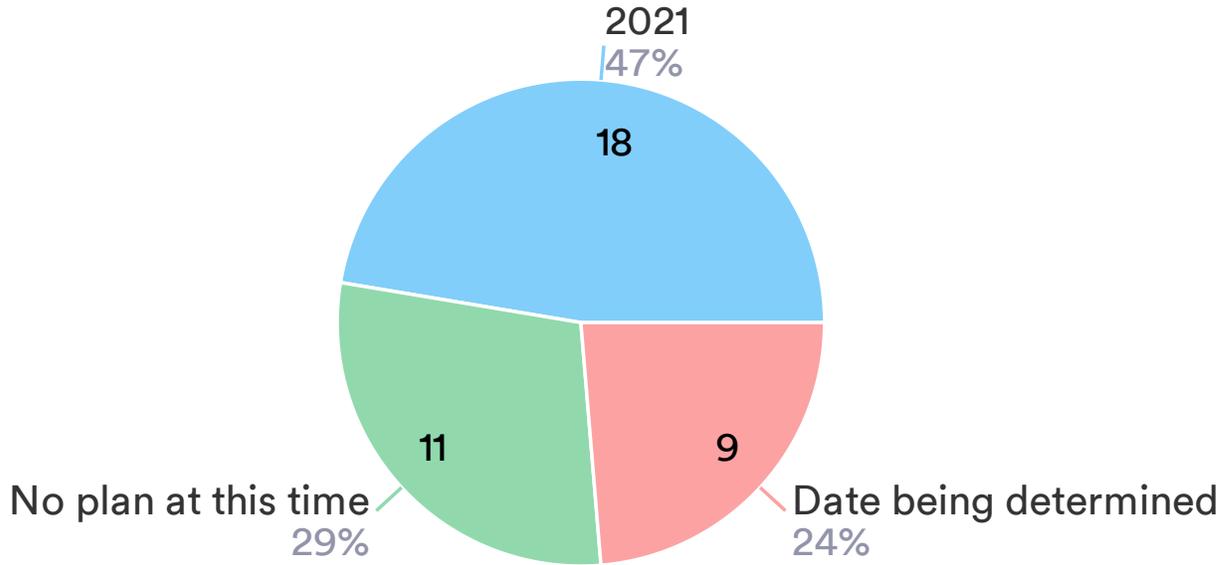


Data	Response	%
Upload and download speeds	4	22%
Age of device	3	17%
Data caps	2	11%
Other	2	11%
OS Type	1	6%
N/A	1	6%
Some demographic and location data. The data c...	1	6%
Number of replacement devices and sustainabilit...	1	6%
SIS platforms, LMS platforms	1	6%
Was the Internet adequate?	1	6%
SEA defined what constituted appropriate device...	1	6%

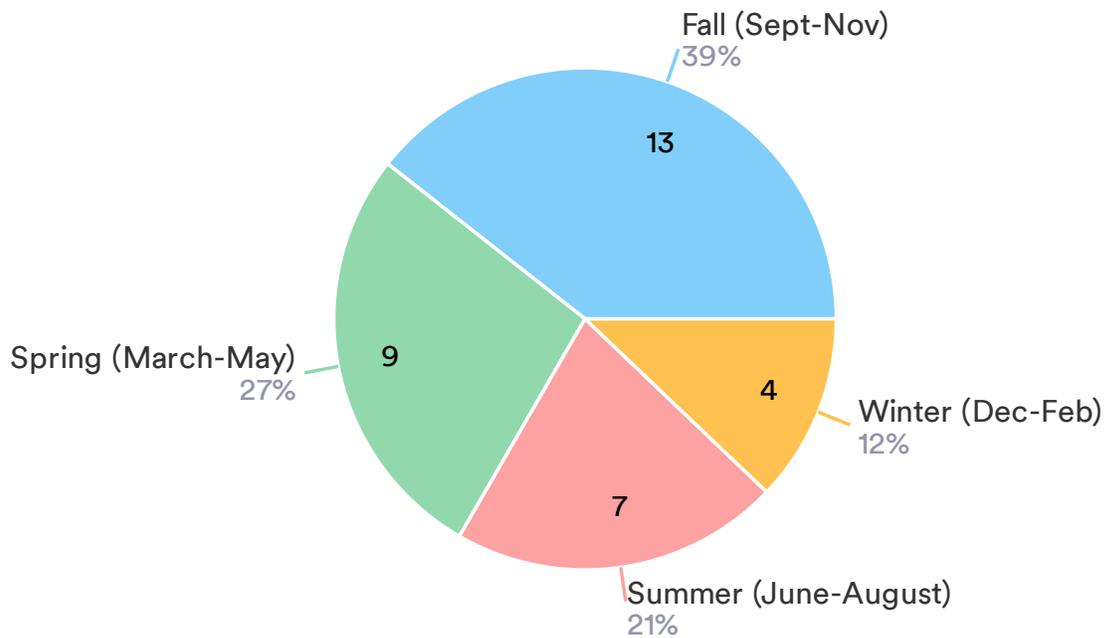
## Will the planned data elements be aligned to CCSSO Recommendations? (linked at top)



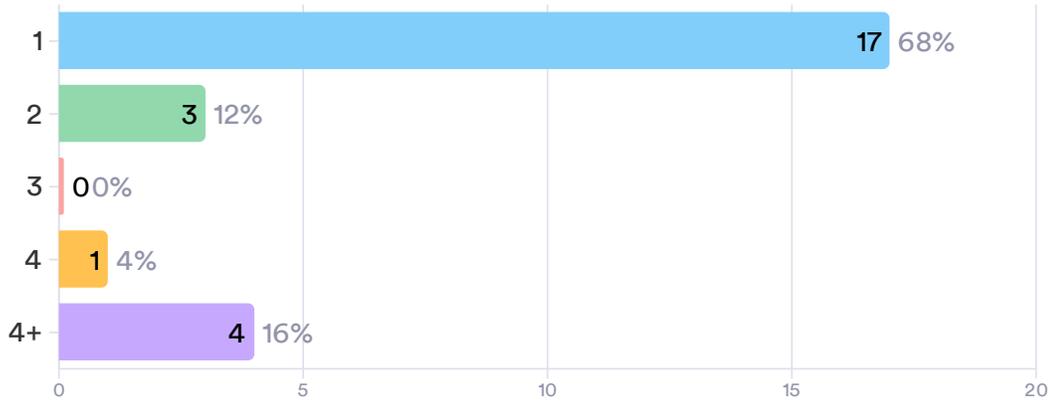
### When do you next plan to collect data?



### What time of year do you plan to collect the data (check all that apply)?

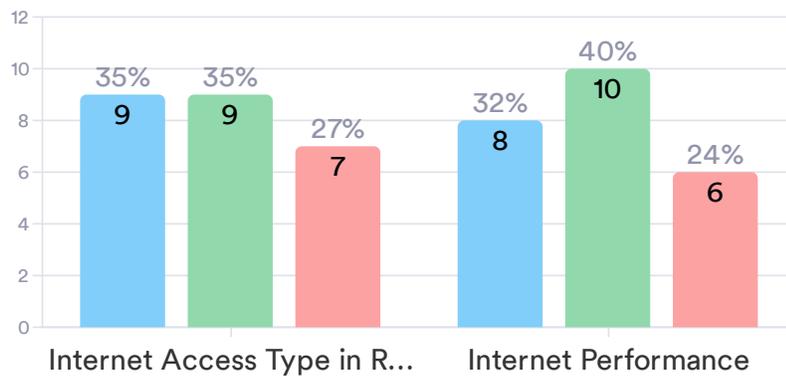
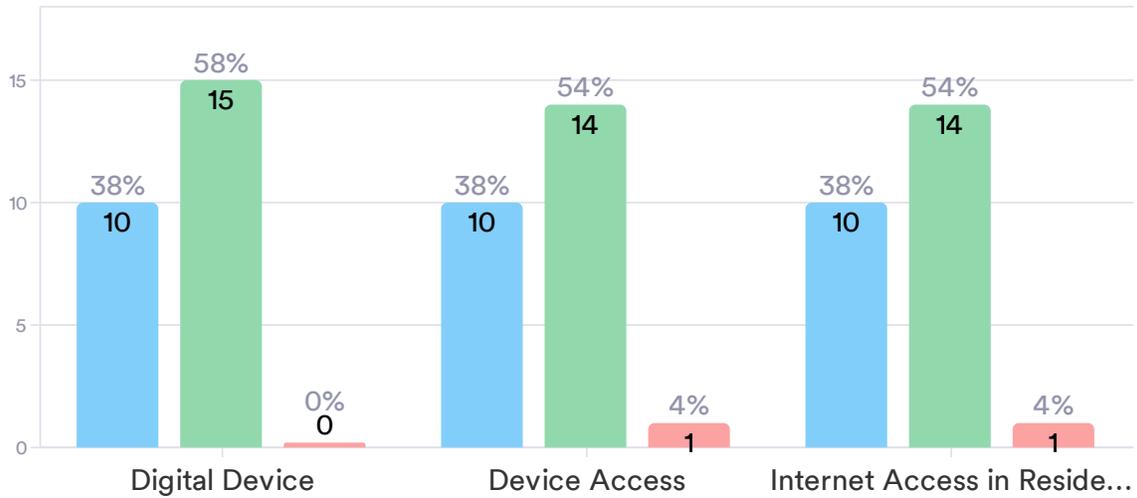


How many data reporting times per year do you anticipate?

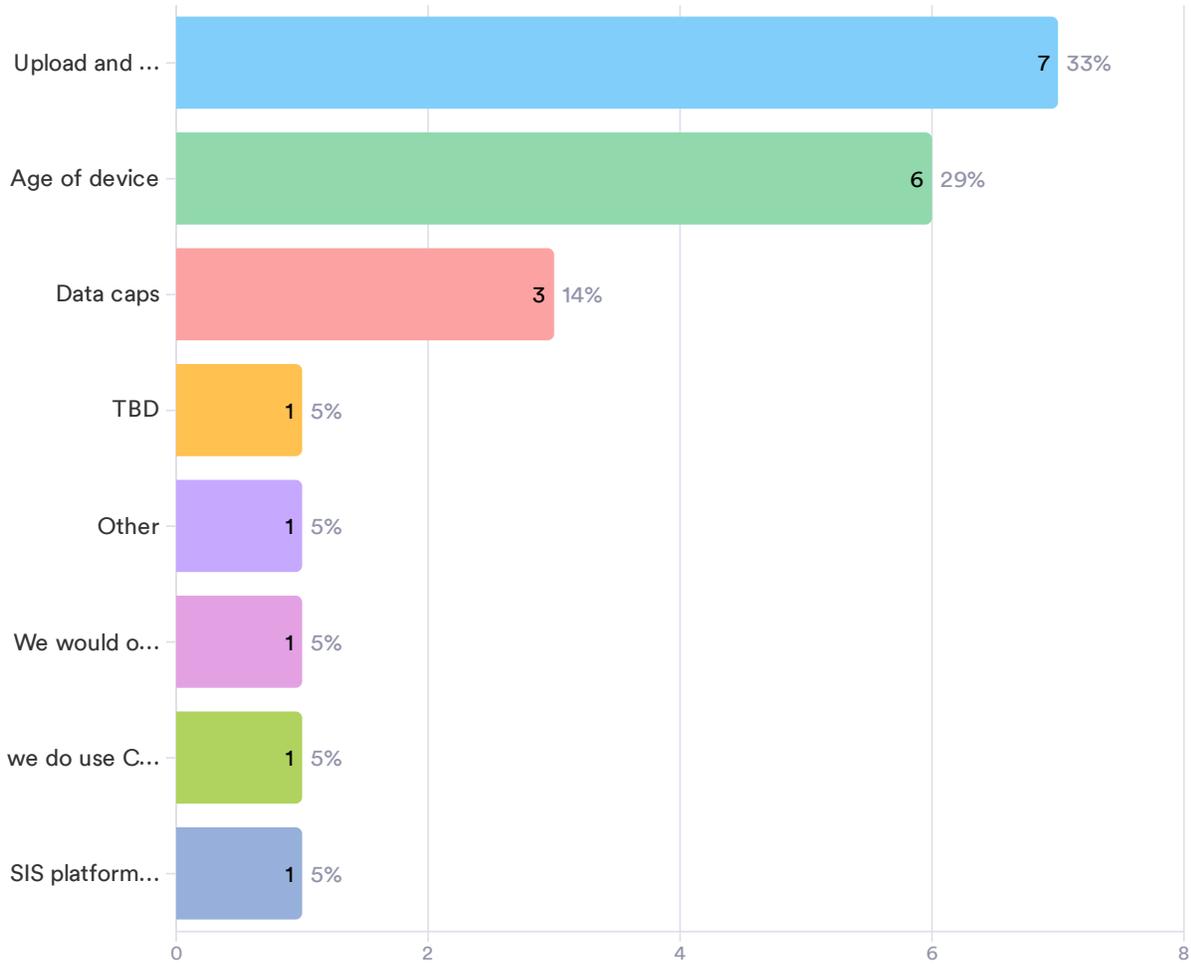


How will the planned data elements be aligned to CCSSO Recommendations? (linked at top)

● Use CCSSO language ● Use SEA specific questions/responses ● Do not plan to collect



What additional SEA Data Elements will be collected? (Check those that apply, if Other, please list separated by commas)



Data	Response	%
Upload and download speeds	7	33%
Age of device	6	29%
Data caps	3	14%
TBD	1	5%
Other	1	5%
We would only collect data from those that identify themselves	1	5%
we do use CCSSO - kind of a hybrid	1	5%
SIS platforms, LMS platforms	1	5%