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### **Data Management and the Pandemic**

**Issue:** Many state and local education agencies (SEAs and LEAs) are challenged by the current situation, given that education agency staff are not experts in pandemic data management and do not have prior experience with similar situations. Also, more pressing needs, such as providing students with food and technology support, have taken precedence over data-related matters.

**Discussion Questions:** How is your agency approaching data management and ensuring that essential data are collected during the pandemic? How are agencies addressing technology equity in school reopening guidelines and plans? Which technologies have helped your agency maintain continuity of operations? What practices has your agency found most useful for accessing and using data systems remotely? Agencies have been collecting data via surveys to better understand students' access to the Internet and technology devices, and to help inform decisions related to reopening schools—what strategies are agencies using to develop and deploy these data collection tools? Is your agency considering or using interim assessments in place of required summative assessments?

SEA members noted multiple challenges and solutions related to data management during the pandemic, including

- submission of LEA continuity of learning plans and reopening plans to the SEA;
- fast work at the SEA level to add certain education sites to the state's authoritative data system;
- possible use of an interim assessment at the SEA level, and development of a plan for attendance that will address federal and state needs;
- partnering with a research organization to determine learning loss; and
- unavailability of waivers for certain federal program requirements, which has been an issue for SEAs and LEAs that may be unable to meet requirements due to the pandemic.

LEA members noted multiple challenges related to data management during the pandemic:

- Managing data that are stored in different product silos has been a challenge.
- It has also been difficult to track and collect data on engagement without a learning management system (LMS).

Members are not sure what flexibility the U.S. Department of Education (ED) will provide to SEAs and LEAs for school year (SY) 2020-21.

A lack of broadband is challenging in certain states and districts. Members discussed how their agencies are addressing and collecting data on technology equity.

- SEA strategies include
  - using Coronavirus Aid, Relief, and Economic Security (CARES) Act funds to address the remote learning digital divide;
  - sending a digital equity survey to all LEAs at the start of the pandemic;
  - developing, implementing, and collecting digital equity data and indicators; and
  - developing digital learning guidance that focuses on technology equity (see the Nebraska Department of Education’s Digital Learning Guidance at <https://www.launchne.com/wp-content/uploads/2020/06/DigitalLearningGuidanceFinal2020.pdf>).
- LEA strategies include
  - being creative to ensure learning continuity; and
  - leveraging social workers and school administrators to identify families that did not have internet access, then issuing hotspots to these families.

Members also noted ways that remote work is impacting themselves and their agencies:

- The pandemic has challenged some agencies. No one planned for such a widespread disruption and some agencies are just managing to keep up. Fortunately, some agencies have not experienced issues during the transition to remote work.
- To ensure internet access, staff have been furnished with laptops equipped with wireless cards.
- Many agencies are using a variety of video conferencing services. Certain agencies are flexible with which services are used to accommodate staff preferences, while others have restricted certain services due to cost concerns and/or security issues. In some cases, agencies receive access to video conferencing services at no cost.
- Some agencies are using secure applications to enhance video conferencing privacy and security. Teachers have also implemented security best practices to screen participants before they can join video conference meetings. New privacy issues with staff who are working remotely, such as teachers sharing screenshots that showed students, have required attention from agencies.

## Data Quality

**Issue:** Given the lack of time, planning, and infrastructure necessary to effectively transition to remote learning and working, data that are currently being collected may have quality issues and poor data quality could compromise the future use of data.

**Discussion Questions:** What strategies can help agencies ensure that data quality is maintained during the pandemic? How has remote work impacted your agency’s data processes? How are differences in student information systems (SISs) affecting data quality assurance (for example, in states with a common statewide SIS vs states that lack a common system)?

Members shared the following data quality challenges:

- Agencies that originally set goals and requirements at the start of the pandemic have faced challenges in meeting expectations. Agencies have had to adjust expectations for spring 2020 data because LEAs faced many barriers to collecting data.
- Agencies stopped tracking certain data, such as attendance, in spring 2020. Some agencies will not report those data on school report cards. Data that were collected in spring 2020 are considered nonreliable in some agencies.
- Agencies have had trouble validating reported student data, which resulted in additional data validation work.
- The Civil Rights Data Collection (CRDC) has decided to shift the 2019-20 CRDC to 2020-21. Members noted that SEAs and LEAs will likely still be impacted by the pandemic and next year's data may have the same quality issues.

SEA members shared the following strategies for maintaining data quality during the pandemic:

- SEAs can reduce the data burden on LEAs by focusing on required and must-have data.
- If data will have quality issues, consider dropping the data from required data collections.
- In agencies with a statewide SIS, SEAs can review LEA data and proactively reach out if quality issues are present.
- School report cards that are published online could include a link to a document detailing which data are not reported due to the pandemic.
- Where assessments have been waived, the introduction of a “waived” code allows this to be accounted for. This is the only code that LEAs can report and it will provide documentation for future reference.

LEA members shared the following strategies for maintaining data quality during the pandemic:

- Agencies need to consider the impact of changes in data reporting and collection. For example, agencies that decide to issue Satisfactory/Unsatisfactory grades instead of letter grades could unintentionally disadvantage students who apply for scholarships that require letter grades.
- Consider SY 2019-20 a partial year and note this historically for future reference.

Members noted the importance of metadata:

- Metadata are important, particularly when looking at data longitudinally. While the pandemic is fresh in everyone's mind now, its impact on education data will need to be denoted for the future. The [Forum Guide to Metadata: The Meaning Behind Education Data](#) offers best practice concepts, definitions, implementation strategies, and templates/tools for an audience of data, technology, and program staff in SEAs and LEAs.
- Some data are not being reported, but data that are reported during the pandemic could be tagged “COVID”. Membership days could also help indicate the impact of the pandemic.

## Attendance Data

**Issue:** Defining, collecting, and using attendance data has been challenging during extended school closures.

**Discussion Questions:** How can education technologies be used to collect attendance data during extended school closures? Is your agency capturing data on student participation in instruction beyond attendance, and if so, how? How can agencies track participation/attendance in different modes of learning (blended, virtual, etc.)?

Members shared their agencies' approaches to tracking attendance, participation, and engagement during the pandemic. Some SEA approaches include

- implementing new features in the statewide SIS (where applicable) to track participation using data submitted by teachers and students (LEAs may need to keep detailed documentation on participation—if an SEA's accountability model does not include engagement, these data won't be an issue);
- holding internal discussions to define attendance in three learning settings: in-person, virtual, and remote (where students have online and hard-copy learning materials);
- shifting towards measures of engagement, such as task and content completion, in lieu of login tracking and seat-time;
- reviewing and improving attendance data practices with the aid of the [Forum Guide to Collecting and Using Attendance Data](#); and
- considering adding two new attendance codes to measure engagement in e-learning and remote learning without an online component.

Some LEAs are taking approaches such as

- using assignment completion as an indicator of attendance and participation during extended e-learning time;
- adding codes to track virtual attendance, while leveraging LMS stored data (including time logged in, lessons reviewed, and assignments submitted) for the same purpose;
- continuing to use data on engagement in areas where students will be returning to school; and
- modifying attendance codes to fit current circumstances.

Members discussed attendance issues that have occurred virtually and strategies to support student attendance, participation, and engagement:

- Teachers can use virtual conference platforms to check in or have office hours and social workers can reach out to students who are not participating.
- Certain education technology applications and device monitoring tools can be used to monitor student activity and engagement. With these tools, teachers can monitor their students' desktops during class sessions and chat directly with students to help engagement.
- Both synchronous and asynchronous virtual learning present challenges. Synchronous learning can be difficult for certain households and potentially expose students' personal living space to each other. Asynchronous learning requires teachers to

develop their courses and curricula for an online setting and can make tracking attendance difficult.

- SEAs may create guidelines for LEA e-learning plans.

Members also discussed issues that may arise as schools reopen for in-person learning:

- Funding is based on attendance in certain states, which could necessitate changes to funding decisions. For example, an SEA could hold LEAs harmless for attendance challenges caused by the pandemic and/or allow LEAs to use SY 2018-19 or 2019-20 attendance records for calculating funding.
- It's not clear how decisions to reopen schools or continue remote learning will impact SY 2020-21 enrollment. Families might decide to homeschool their students, send their students to private school, or pursue an alternate learning option that aligns with their preference. In certain states, state health department guidelines apply to both public and private schools.
- Schools that reopen in-person may experience episodic quarantines, where individual students and teachers, classrooms, and/or school buildings need to be quarantined and transition to online or remote learning. Collecting data at the student level could help track the frequency and consistency of in-person, online, and remote learning.
- There may be benefits for educational and health agencies in tracking attendance by "groups," given that students could be absent from school because they need to isolate or quarantine.
- Consistency across states and districts is needed, especially if schools continue to transition between in-person and remote learning. An appendix or supplementary publication to the [Forum Guide to Collecting and Using Attendance Data](#) could help promote consistency in attendance data in remote learning environments.
- Members expressed interest in continuing discussions about attendance.

### **Student Registration Information**

**Issue:** The pandemic has highlighted the need to collect and maintain more comprehensive student registration information.

**Discussion Topic:** What types of technologies can be used to update and verify student information when schools are closed and social distancing must be maintained? What cybersecurity practices are needed to protect comprehensive student registration information? What strategies can be used to automate updates to student registration information?

LEA members shared their agencies' approaches to student registration during the pandemic:

- Several LEAs are using an online student registration platform; some implemented online registration years before the pandemic, while others have recently started using online registration.
- Even with an online registration system, LEAs need to reach neighborhoods and households that don't have internet access, either by phone or in-person. LEAs are also trying to reduce or eliminate paper records.
- Although it is easier to collect information with an online registration platform, some parents still have trouble scanning documents. Instead of having parents come into the

registrar office, LEAs can work remotely with families who need help submitting required documents (for example, by helping families submit cellphone photos of documents).

SEAs can support LEA use of online registration. For example, SEAs have created free online forms for LEAs to use, and even used CARES Act funds to provide all LEAs with two years of access to an online registration platform and an LMS.

Members discussed strategies for ensuring online registration data quality and security:

- Online registration can improve data quality by
  - using clear business rules;
  - including data validation tools that require data to be corrected before submission;
  - automating data cleaning; and
  - entering data automatically into an SIS.
- Agencies can ensure online registration data security by
  - implementing a data-sharing agreement with online registration vendors;
  - housing student data in an encrypted data silo; and
  - using access controls so sensitive documentation is only accessible by staff with a legitimate need.

### Post-Pandemic Data Needs

**Issue:** There may be a need for information and support regarding data that will be needed once the pandemic is over.

**Discussion Topic:** How can data technologies support post-pandemic data needs? How might our consideration of this issue change if school closures continue through the 2020-21 school year? How can the Forum help address these data topics and issues?

Members mentioned that SEAs and LEAs face many data-related challenges at this time:

- The pandemic has left little time for SEAs and LEAs to be proactive.
- Moving forward, there is a need for consistency and comparability across states.
- Agencies can be motivated to make changes and allocate resources if data are required at the federal or state level, but there is a need to be strategic on what is considered necessary and essential at this time.

Members noted that the following types of data and tools will be needed during and after the pandemic:

- Metadata to indicate that data were impacted by the pandemic. Back-end access and application programming interfaces (APIs) are also needed to extract metadata out of vendor systems.
- Data on seat time and participation. These data could help measure student engagement before and after virtual grading policies went into effect.

- Teacher data (including absences, health issues, and online teaching needs) and substitute data (including requirements for substitutes). Once agencies have better data on teacher needs when teaching virtually, a Forum resource on this topic might be helpful.
- Data on homework gaps and data elements to document students without adequate internet connectivity.

Members also discussed transitioning to virtual learning during SY 2019-20 and reopening schools during SY 2020-21:

- Student engagement declined in states and districts that implemented pass/incomplete or other types of “hold harmless” grading policies for spring 2020. For example, in SEAs where transition documents recommended pass/incomplete grading for spring 2020 and a standard grading policy for long-term online learning, LEAs in the state noted a lack of student participation online.
- Online learning has not been well received, but it can be an effective learning option with adequate time and preparation. Online learning has historically been more prevalent in higher education settings, which might be a resource for information on online learning effectiveness.
- Based on their experiences during the pandemic, teachers might better understand the need for digital learning tools and curricula.
- Early childhood, prekindergarten, and kindergarten teachers will need adequate virtual education training. Parents and students will also need training on how to use online resources.
- SEAs and LEAs are supporting online teaching and learning by
  - setting up virtual schools to provide online instruction;
  - considering creating instructional design units to help teachers who are teaching online;
  - using CARES Act funds for teaching coaches to help improve teachers’ online teaching skillset; and
  - using CARES Act funds to expand one-to-one computing.
- When LEAs have attempted to allocate devices on a one-per-family basis, this has posed challenges for multi-student families with only one device to share.
- State legislatures may offer funding assistance to families who cannot afford broadband access at the reduced rates being offered to them.
- Districts and schools are expecting teacher shortages when schools reopen. Teachers who return to class may be out sick due to a mild cold or the need to isolate or quarantine, which could impact classes of students who might also need to quarantine. It is difficult to find effective substitute teachers and will be more challenging to find substitutes who can teach online. Even so, agencies are considering hiring substitutes expressly to provide online instruction to students who are unable to attend school in person. This would lessen the burden on teachers who might otherwise be responsible for teaching both in-person and online classes.

- The Council of Chief State School Officers has released several resources and tools to assist with reopening schools and recovering learning loss:  
<https://ccsso.org/coronavirus>.

### **Other Issues**

Other pandemic-related data issues identified by members included the following:

- School report cards, including how agencies are modifying SY 2019-20 report cards, how agencies are handling report cards data impacted by the pandemic, and how agencies are going to indicate the pandemic's impact longitudinally.
- Gaps in parental language and technical abilities, which can affect their household's access to technology.