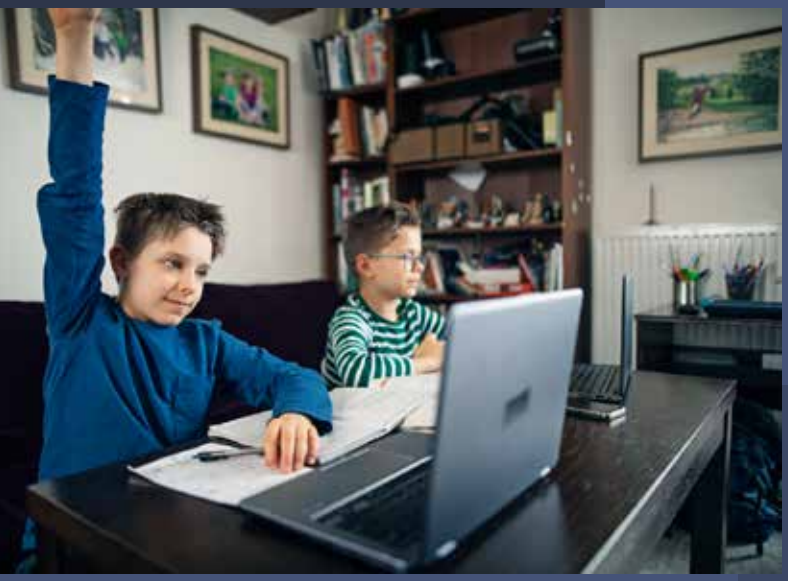
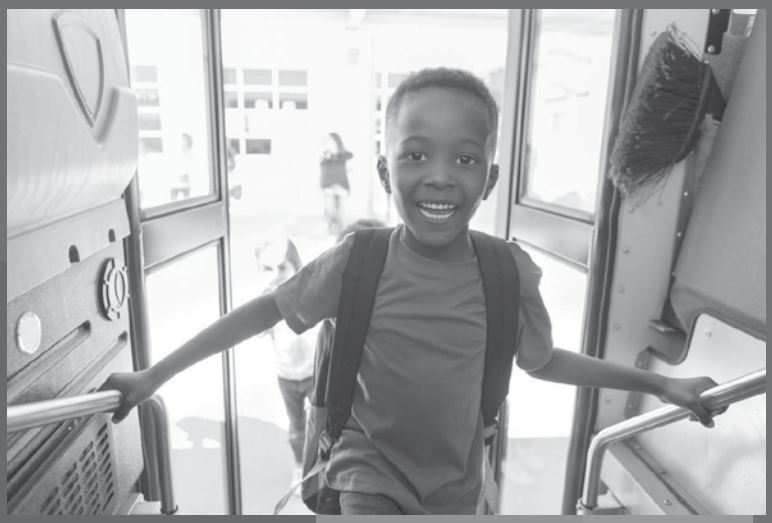


Forum Guide to Attendance, Participation, and Engagement Data in Virtual and Hybrid Learning Models

National Forum on Education Statistics



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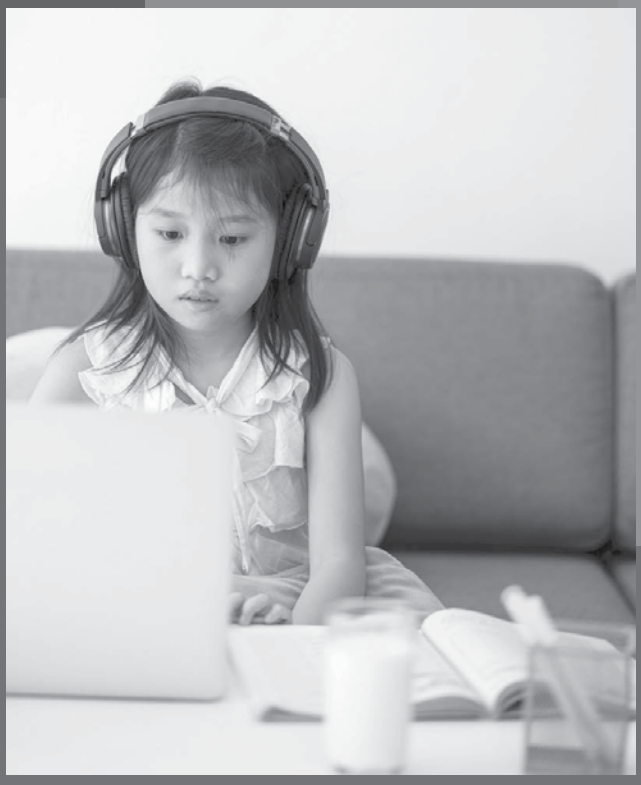

National Cooperative Education Statistics System

The National Center for Education Statistics (NCES) established the National Cooperative Education Statistics System (Cooperative System) to assist in producing and maintaining comparable and uniform information and data on early childhood, elementary, and secondary education. These data are intended to be useful for policymaking at the federal, state, and local levels.

The National Forum on Education Statistics (Forum) is an entity of the Cooperative System and, among its other activities, proposes principles of good practice to assist state and local education agencies in meeting this purpose. The Cooperative System and the Forum are supported in these endeavors by resources from NCES.

Publications of the Forum do not undergo the same formal review required for products of NCES. The information and opinions published here are those of the Forum and do not necessarily represent the policy or views of NCES, the Institute of Education Sciences, or the U.S. Department of Education.

June 2021

This publication and other publications of the National Forum on Education Statistics may be found at the websites listed below.

The NCES Home Page address is http://nces.ed.gov

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Technical Contact

Ghedam Bairu

(202) 245-6644

ghedam.bairu@ed.gov

Foreword

The National Forum on Education Statistics (Forum) is pleased to present the *Forum Guide to Attendance, Participation, and Engagement Data in Virtual and Hybrid Learning Models*. This resource was developed as a companion publication to the 2018 *Forum Guide to Collecting and Using Attendance Data* (https://nces.ed.gov/forum/pub_2017007.asp) drawing upon the information included in that resource and incorporating lessons learned by state and local education agencies (SEAs and LEAs) during the coronavirus disease (COVID-19) pandemic. The companion document provides an overview of best practices that will help education agencies collect, report, and use attendance, participation, and engagement data in different learning formats. The information is intended to help agencies respond to the current need for these data, as well as future scenarios, such as courses with blended, or hybrid, learning models or natural disaster situations in which extended virtual education is required.

Publication Objectives

This resource is intended to address the needs of federal, state, and local agencies related to

- operationally defining attendance, participation, and engagement within different learning models;
- collecting attendance, participation, and engagement data in virtual, in-person, and hybrid learning models; and
- addressing challenges related to attendance data during a crisis.

Intended Audience

This resource is intended for education agency leadership and staff in federal, state, and local education agencies whose responsibilities include any aspect of collecting, reporting, or using student data related to attendance, participation, or engagement. This audience includes program and data staff, researchers, administrators, policymakers, and others who are tasked with using data to improve student and school outcomes.

Organization of This Resource

This resource includes the following chapters and appendices:

- Chapter 1 explains the purpose of the document; provides foundational information about student attendance, participation, and engagement; and briefly discusses SEA and LEA uses of these concepts during the COVID-19 pandemic.
- Chapter 2 examines how attendance, participation, and engagement data are collected in different learning models, such as various blended, or hybrid, models, as well as virtual models (including synchronous or asynchronous learning).
- Chapter 3 considers the key differences between the traditional "seat time" model of attendance and those systems that instead focus on student progression through particular standards.
- Chapter 4 reviews the importance of well-defined policies for collecting student attendance, participation, and engagement data, and discusses how education agencies approach novel situations and key decisionmaking that are informed by these data.
- Chapter 5 provides case studies from states and districts that highlight how education agencies are handling the collection and use of attendance data during the COVID-19 pandemic.

National Forum on Education Statistics

The work of the National Forum on Education Statistics (Forum) is a key aspect of the National Cooperative Education Statistics System (Cooperative System). The Cooperative System was established to produce and maintain, with the cooperation of the states, comparable and uniform education information and data that are useful for policymaking at the federal, state, and local levels. To assist in meeting this goal, the National Center for Education Statistics (NCES) within the Institute of Education Sciences (IES)—a part of the U.S. Department of Education (ED)—established the Forum to improve the collection, reporting, and use of elementary and secondary education statistics. The Forum includes approximately 120 representatives from state and local education agencies, the federal government, and other organizations with an interest in education data. The Forum deals with issues in education data policy, sponsors innovations in data collection and reporting, and provides technical assistance to improve state and local data systems.

Development of Forum Products

Members of the Forum establish working groups to develop guides in data-related areas of interest to federal, state, and local education agencies. They are assisted in this work by NCES, but the content comes from the collective experience of working group members who review all products iteratively throughout the development process. After the working group completes the content and reviews a document a final time, publications are subject to examination by members of the Forum standing committee that sponsors the project. Finally, Forum members review and formally vote to approve all documents prior to publication. NCES provides final review and approval prior to online publication. The information and opinions published in Forum products do not necessarily represent the policies or views of ED, IES, or NCES. Readers may modify, customize, or reproduce any or all parts of this document.

Working Group Members

This online publication was developed through the National Cooperative Education Statistics System and funded by the National Center for Education Statistics (NCES) within the Institute of Education Sciences (IES)—a part of the U.S. Department of Education (ED). The Attendance, Participation, and Engagement Working Group of the National Forum on Education Statistics is responsible for the content.

Co-Chairs

Jan Petro, Colorado Department of Education

Cheryl L. VanNoy, Saint Louis Public Schools (MO)

Members

Ruth Calvo, Commonwealth of the Northern Mariana Islands Public School System

Dena Dossett*, Jefferson County Public Schools (KY)

Charlotte Ellis, Maine Department of Education

Jan Fukada*, formerly of the Hawaii State Department of Education

Laura Hansen*, Metro Nashville Public Schools (TN)

Carmen Jordan, Arkansas Department of Education

Rachel Kruse*, Iowa Department of Education

Anita Larson, formerly of the Minnesota Department of Education

Zenaida Napa Natividad, Guam Department of Education

Ellis Ott*, Fairbanks North Star Borough School District (AK)

Linda Rocks*, Bossier Parish Schools (LA)

Consultant

Bridget Thomas, Quality Information Partners

Project Officer

Adam Todd, National Center for Education Statistics

* Working group members marked with an asterisk also contributed case studies or real-world examples to this guide.

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Members of the Attendance, Participation, and Engagement Working Group would like to thank everyone who reviewed or otherwise contributed to the development of the *Forum Guide to Attendance, Participation, and Engagement Data in Virtual and Hybrid Learning Models*, including the following case study and real-world example contributors:

Case Study and Real-World Example Contributors

Katy Deferrari, Brent Lynch, and Jennifer Westerfield, Jefferson County Public Schools (KY)

Bradley Redmond, Metro Nashville Public Schools (TN)

Contents

Chapter One: **Introduction**

Regular attendance is essential to providing students with opportunities to learn. State and local education agencies (SEAs and LEAs) play a crucial role in tracking, measuring, and addressing student attendance. Access to accurate, timely data about whether individual students and groups of students regularly attend school is critical to making instructional and programmatic choices to maximize student attendance and support student learning.

The coronavirus disease (COVID-19) pandemic affected the way that many SEAs and LEAs collect attendance data. Due to the COVID-19 pandemic, many LEAs across the country moved—at least temporarily—to virtual learning for most or all of their students. The widespread use of virtual learning increased the need for attendance data showing that students can access their lessons remotely. At the same time, this widespread use complicated the duty of educators to collect attendance data. Instead of tracking whether a student was physically present in a classroom, educators tracked data such as whether a student attended a set number of virtual meetings, submitted assignments, or interacted via email with a teacher. As a result of these changes, many educators and data experts asked how attendance could be best assessed in virtual and hybrid environments. Some suggested that an assessment of student participation or engagement would be a more appropriate means of monitoring students in a virtual setting than traditional methods of tracking absences.

Purpose of the Resource

This resource highlights how SEAs and LEAs have operationally defined attendance, participation, and engagement during the COVID-19 pandemic, and how they may be collecting data on each. These distinct but interrelated concepts have become increasingly important and challenging to track during the widespread transition to virtual and hybrid education models. Agencies require attendance data for funding requirements, immediate daily needs, and long-term needs. Some states and districts are using participation data, engagement data, or both in place of attendance data, but these data are not necessarily comparable. Additionally, during the continuing changes and adjustments arising from the COVID-19 pandemic, SEAs and LEAs have found it necessary to remain fluid in both their implementation of education models and the related data collection.

The information in this resource serves as a complement to the 2018 *Forum Guide to Collecting and Using Attendance Data* (https://nces.ed.gov/forum/pub_2017007.asp) The 2018 guide recommended practices to help education agencies collect, report, and use attendance data to improve student and school outcomes. This resource draws upon the information included in the 2018 resource and incorporates lessons learned by SEAs and LEAs during the

COVID-19 pandemic. The current document provides an overview of best practices that will help education agencies collect, report, and use attendance, participation, and engagement data in different learning formats. The information is intended to help agencies respond to the current need for these data, as well as future scenarios, such as courses with blended, or hybrid, learning models or natural disaster situations in which extended virtual education is required.

Virtual and In-Person Attendance

Students are considered "present" if they are attending an instructional program approved by the state, district, or school. Traditionally, this definition has applied to attendance in a physical school building or a virtual learning environment, though there may be variations in data collection measures between physical and virtual environments, as in the following:

- Attendance measures for courses that are taught in traditional, in-person settings are typically calculated based on the number of days or periods a student is present in the physical classroom.
- Attendance in a virtual environment may be measured based on minutes of instruction, time logged in, performance on assessments, competency achievement, or other factors.

Differences in how attendance is measured in in-person and virtual settings mean that these measures often are not comparable and agencies must map virtual education data to in-person data for reporting purposes.

Attendance, Participation, and Engagement

Even before the COVID-19 pandemic, many education agencies considered the value of looking at students' participation in learning activities or their levels of engagement, in addition to their attendance. As learning models shifted during the COVID-19 pandemic, agencies began reviewing data collections that measured students' involvement in their daily learning. Attendance, participation, and engagement are related yet distinct concepts in student learning. States and districts may differ in their exact definitions of these terms, but common definitions tend to be similar to the following:

- Students are considered in **attendance**, or present, if they are attending an instructional program approved by the state, district, or school.[1]
- Student **participation** is defined as involvement of students in activities related directly or indirectly to their schoolwork.[2]
- Student **engagement** is characterized by meaningful involvement by learners in their education or training.[3]

1 National Forum on Education Statistics. (2018). *Forum Guide to Collecting and Using Attendance Data* (NFES 2017-007). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved January 14, 2021, from https://nces.ed.gov/forum/pub_2017007.asp.

2 Education Resources Information Center. (n.d.). *Student Participation*. Retrieved January 14, 2021, from https://eric.ed.gov/?qt=Student+Participation&ti=Student+Participation.

3 Education Resources Information Center. (n.d.). *Learner Engagement*. Retrieved January 14, 2021, from https://eric.ed.gov/?qt=engagement&ti=Learner+Engagement.

The concept of student engagement is prominent in the field of education research. Researchers have identified three key dimensions of student engagement:[4]

- **Behavioral engagement measures** focus on participation and involvement in academic, social, or extracurricular activities.
- **Emotional engagement measures** focus on the strength of relationships with and perceptions of teachers, classmates, academics, and school.
- **Cognitive engagement measures** focus on learning effort and investment.

Due to the multiple definitions and measures, consensus on how to define and measure student engagement may be difficult for school officials to achieve.

4 Fredricks, Blumenfeld, and Paris, as cited in Fredricks, J., McColskey, W., Meli, J., Mordica, J., Montrosse, B., and Mooney, K. (2011). *Measuring Student Engagement in Upper Elementary Through High School: A Description of 21 Instruments*. (REL 2011-098). Washington, DC: Regional Educational Laboratory Southeast. Retrieved January 14, 2021, from https://ies.ed.gov/ncee/edlabs/projects/project.asp?ProjectID=268.

Chapter Two: **Attendance, Participation, and Engagement in Different Learning Models**

Traditionally, attendance data have been collected in a variety of ways based on the school in which a student is enrolled. For example, attendance may be collected differently in elementary and secondary schools, even if those schools are in the same district. Whereas elementary school students may have their attendance recorded once or twice per day, secondary school students often have their attendance recorded more frequently, as they change classroom locations throughout the school day.

Different attendance measures have been used by agencies to provide different levels of detail, and some of these measures also may be considered measures of participation or engagement when collected accurately. For example, attendance is sometimes collected as the number of minutes a student is present in a particular class period, which also could be considered a measure of participation. While attendance measures for courses taught in traditional, in-person settings are typically calculated based on the number of days or periods a student is present in the physical classroom, some courses may use performance-based attendance measures, which could be used as measures of engagement. These measures may include the number of meetings with instructional and support staff, the number of successfully completed assignments or lesson plans, or the amount of time spent actively engaged in a virtual learning environment.

This chapter examines how attendance, participation, and engagement data are collected in different learning models, including various types of blended, or hybrid, models, as well as virtual models (including synchronous or asynchronous learning).

During the coronavirus disease (COVID-19) pandemic, local education agency (LEA) administrators and data leaders considered multiple ways to collect data on attendance, participation, and engagement. These include, but are not limited to

- counting students as present unless their parent or guardian contacted the LEA and explicitly told staff that the student was absent;
- counting all students as present if instruction was provided;
- counting students as present provided they checked in;
- broadening the definition of a check-in to accommodate students (check-ins may include telephone calls, online meeting attendance, or turning in work), or adjusting the number of required check-ins;
- tasking education staff with specific responsibility for student contacts and check-ins;
- tracking participation or engagement rather than traditional attendance;

- keeping local data on engagement in addition to required data on attendance;
- developing a new attendance code for students who do not engage, and keeping this separate from the usual absence code;
- creating a new "blended learning" attendance code to indicate days that students are using remote learning in a hybrid model;
- creating more granular attendance codes to indicate why a student is staying home (such as mandated quarantine, risk avoidance, or remote learning preference); and
- using participation or engagement data from interventions or activities as a proxy for attendance for students with a personalized learning plan (such as an Individualized Education Program [IEP] or other specialized plan).

Virtual Education During the COVID-19 Pandemic

The expansion of virtual education has introduced new measures of attendance. Attendance in a virtual environment may be measured based on minutes of instruction, time logged in, performance on assessments, competency achievement, or other factors. State education agencies (SEAs) and LEAs across the country used these types of measures as they—at least temporarily during the COVID-19 pandemic—increased their levels of virtual learning.

During the COVID-19 pandemic, states and districts made a range of decisions about whether students would be involved in in-person instruction, and if so, to what extent. Agencies varied in their models, which included variations of in-person, virtual, or hybrid[5] (or blended) learning. Additionally, these variations were apt to change throughout the school year depending on the rates of COVID-19 transmission in the state or district at a given time. In Iowa, for example, districts were able to apply on a biweekly basis for a waiver to move to or continue 100 percent virtual instruction every two weeks if they showed positive COVID-19 test rates of 15 percent.

Within a virtual model, approaches to the delivery of instruction and rate of advancement or progress through academic content vary.

- In synchronous instruction, content is taught to a group of students who log in, tune in, or otherwise participate at a specified time and learn at the same time, as in a traditional course section, but without a shared physical presence. This approach consists of group-oriented teaching and learning organized around participants interacting at the same time and in the same virtual space.
- In asynchronous instruction, students access course section instruction and materials, and complete assignments at their convenience by agreed-upon deadlines. This approach consists of student-oriented teaching and learning that is not organized around participants interacting at the same time and in the same space.
- A third alternative combines asynchronous activities with periodic synchronous activities, such as live online discussions and chats, webinars (online seminars), or videoconferencing sessions. In some cases, schools or teachers may decide to offer a mix of synchronous and asynchronous learning, either within a given day or on different days of the week. For example, some LEAs offer synchronous instruction with set times for each class on Monday through Thursday, but designate Friday as an asynchronous day when students are expected to complete work on their own.

5 A hybrid learning model combines two or more models.

Examples of Learning Models in SEAs and LEAs

The different needs and demographics of education agencies, as well as instruction from state officials or legislatures, have driven the decisionmaking process regarding learning models during the COVID-19 pandemic. The examples in the following table illustrate SEA and LEA approaches to learning models in school year (SY) 2020-21.

SEA	Learning Model in SY 2020-21
Arkansas Department of Education	LEAs used a range of models. Each had to submit a Ready for Learning Plan for approval from SEA.
Colorado Department of Education	Varied based on LEAs' circumstances and COVID-19 rates. Methods varied among all virtual, all in-person, and hybrid models.
Commonwealth of the Northern Mariana Islands Public School System	A virtual model with synchronous and asynchronous instruction was used. Some in-person learning was provided to students who needed that accommodation, but the students had to meet certain requirements. There was a plan for students to return to in-person learning using a hybrid model; however, there was an expectation that students would not be in person 100 percent of the time because class sizes were too large to meet social distancing requirements.
Guam Department of Education	Three options were provided in fall 2020: virtual learning, remote learning (consisting of hard copy pick-up and drop-off at school during specified times), and hybrid learning (a mix of virtual learning and hard copy). The Governor's Executive Order prohibited in-person learning in the fall, but in the spring this model was dependent on the COVID-19 Area Risk score. In-person required a school to submit a School Re-opening Plan for review by the District/School Re-opening Task Force, following a Pandemic Risk Assessment checklist and approval by the superintendent. Schools were available for in-person learning as of January 2021, but only 34 percent of students chose this model. The rest remained virtual.
Hawaii State Department of Education	In-person for high-needs students (students in special education, English learners, early elementary students, and students in significant transition grades—K, 6th, 9th, 12th); all others were virtual. As schools were able, in-person learning opportunities were extended to more students.
Iowa Department of Education	LEAs varied among in-person, virtual, and hybrid models. The governor required LEAs to provide at least 50 percent in-person instruction. Districts with a 15 percent or higher COVID-19 positivity rate could apply for an all-virtual waiver for two-week periods.

SEA	Learning Model in SY 2020-21
Maine Department of Education	The Maine Department of Health and Human Services (DHHS) and the Maine Center for Disease Control and Prevention (Maine CDC) developed a three-category system to inform local decisions about whether and how to bring students back into the classroom. The system categorizes counties based on a holistic assessment of quantitative and qualitative information, including, but not limited to, recent data on case rates, positivity rates, and symptoms of influenza or COVID-19. • Red suggests that the county has a high risk of COVID-19 spread and that in-person instruction is not advisable. • Yellow suggests that the county has an elevated risk of COVID-19 spread and that schools may consider hybrid instructional models to reduce the number of people in schools and classrooms at any one time. • Green suggests that the county has a relatively low risk of COVID-19 spread and that schools may consider in-person instruction, if they are able to implement the required health and safety measures. Schools in a "green" county may need to use hybrid instruction models if there is insufficient capacity, or if other factors (facilities, staffing, geography, transportation, etc.) prevent full implementation of the health and safety requirements. All LEAs have the option to go virtual at any time. Many LEAs have chosen a hybrid model even when their county is designated green.
Minnesota Department of Education	LEAs used multiple models and submitted them to the SEA for approval.
LEA	**Learning Model in SY 2020-21**
Bossier Parish Schools (LA)	Began the SY with multiple options: all-virtual for any grade; grades PreK-5 in-person; and grades 6-12 with rotating cohorts between in-person and virtual. Transitioned to having each student either all in-person or all virtual, based on parent decision.
Fairbanks North Star Borough School District (AK)	Began with virtual education. Phased into in-person, with students in special education, high-need, connectivity issues coming back first.
Jefferson County Public Schools (KY)	All students began the school year virtual. Plans call for phase into in-person learning starting with elementary in March 2021 and then moving to middle and high school levels in April 2021. Parents have the option to remain virtual for the remainder of the school year.
Metro Nashville Public Schools (TN)	Started as all virtual; began phasing into in-person starting with elementary and moving up. Parents could choose to remain virtual for the SY.

LEA	Learning Model in SY 2020-21
Saint Louis Public Schools (MO)	All virtual during the 1st quarter; families and students needing special assistance were provided additional support and interaction from on-site facilitators at 18 locations. After the 1st quarter, families continue to be able to select their preferred method of instruction. In-person numbers at individual schools determine scheduling options, such as A/B schedule, all virtual on Fridays, etc.

Table 1. Examples of SEA and LEA Learning Models in SY 2020-21.

NOTE: The information in this table is current as of February, 2021.

Moving to Different Models

The responsibility for determining when to shift between models varies among agencies. In some cases, decisions about moving between virtual, hybrid, and in-person models are made by state leaders such as governors or superintendents, but in many locations these decisions are made at the LEA or school level. For example, LEA leaders determine when to move between models in both Colorado and Minnesota. In Hawaii, individual school principals make these decisions. During the COVID-19 pandemic, the decision to shift between models typically has been informed by COVID-19 positivity rates within the state or individual district. Even with these transition expectations, most SEAs and LEAs also allow parents or guardians to keep their children in all-virtual learning.

Decisions about Data Collection

Metro Nashville Public Schools (TN) created criteria for the learning models the local education agency (LEA) may move between as COVID-19 pandemic circumstances change. These are based on a set of community COVID-19 indicators and the LEA's internal capacity assessments. More information is provided here: https://www.mnps.org/covid-19/covid-tracker

Within the different learning models, SEAs and LEAs have chosen whether to focus on attendance, participation, or engagement (or some combination of these concepts), as well as how to collect these data. These decisions may be made by necessity: Some data may be easier to collect than others during a crisis or may be dependent on the nature of an agency's student information system (SIS). These decisions also may be based on what aligns best with the chosen learning model. For example, an LEA that is fully virtual may require students to check in to the SIS at specified times to show they are present, or it may log the time that a student is online to verify level of participation. An SEA that is particularly concerned about student engagement during virtual education may require a certain number of assignments to be completed or require students to have regular video conversations with their teachers.

Education agencies also vary in how they operationally define the concepts of attendance, participation, and engagement—that is, defining how that concept will be used for the logistics of data collection. For example, one LEA may require teachers to make a single attendance notation at the beginning of the day that marks a student present or absent, while another LEA may require that a student be in class for at least half of the hours of the school day to count as present. Many agencies have found that the policies and procedures that governed data collection before the COVID-19 pandemic are no longer sufficient to collect accurate data in a way that provides the most useful information about student progress. Many SEAs and LEAs have not formally changed their official definitions of these concepts but are aware that the actual collection of these data under their COVID-19 pandemic learning models has necessarily shifted. In Metro Nashville Public Schools (TN), for example, data leaders are required by the

SEA to maintain a daily attendance value for each student. Like other LEAs in the state, they have had to create the measures they use to collect attendance data during the COVID-19 pandemic and turn the data they are receiving into a "seat time" measure (as discussed in Chapter 3). Additionally, the SEA requires the reporting of a distance code for attendance for students who are considered present but not engaged in "in-person" learning. While staying with seat time allows for comparisons with previous years and comparisons with students who are learning in person, this method may not reflect actual student participation or engagement with instruction.

In most locations, some form of attendance is required for each instructional day.

- In Metro Nashville Public Schools' (TN) virtual learning, students are considered present if they log in at any time during the school day.
- In Jefferson County Public Schools (KY), schools must record "daily participation," which is a measure of the interactions between teachers and students.
- Bossier Parish Schools (LA) has provided a self-reporting option for attendance in its new SIS.
- In the Commonwealth of the Northern Mariana Islands Public School System, attendance initially was defined as the completion of assignments when schools were closed and schoolwork was issued through learning packets. Schools have moved into a blended learning model in which attendance is determined by face-to-face time when on campus and the timely submission of assignments during asynchronous (off-campus) learning.
- SEAs in Arkansas, Colorado, and Iowa are allowing flexibility for LEAs in how they collect daily attendance, but they have provided guidance documents with suggested options.

New Uses for Data Codes

Some agencies have chosen to use existing data codes, such as "alternate method of instruction" (AMI), non-traditional instruction (NTI), or varying distance learning codes, as a means to indicate that students are in virtual or hybrid models. In some cases, these codes had existed previously in case of extreme weather events, but now are used during the COVID-19 pandemic, as described in the following examples:

- For the past several years, the Kentucky Department of Education (KDE) had an established system for documenting "non-traditional instruction," which was used primarily by rural districts during extended periods of inclement weather. During the COVID-19 pandemic, KDE was able to modify and expand this approach for all districts.
- The Missouri Department of Elementary and Secondary Education (DESE) created an Alternative Methods of Instruction (AMI) Policy, which allows school districts to go immediately into a virtual setting in case of weather or other emergency issues. Beginning in school year 2020-21, a local education agency (LEA) is not required to make up school hours that are lost or cancelled due to exceptional or emergency circumstances (up to 36 hours) if the LEA implements an AMI Plan that is approved by DESE.

Schools do not necessarily need to close because of inclement weather—weather or snow days may be replaced with virtual learning days. Agencies would not necessarily have considered this change had districts and schools not gained experience with virtual education during the COVID-19 pandemic.

The following table provides examples of how some SEAs and LEAS are collecting attendance.

SEA	Attendance Data Collection During the COVID-19 Pandemic
Arkansas Department of Education	Attendance collection has not changed, although teachers are responsible for entering the data into the LEA's SIS.
Colorado Department of Education	Individual LEAs decide the process.
Commonwealth of the Northern Mariana Islands Public School System	Teachers take attendance when students are on campus and make updates on attendance for asynchronous days as assignments are submitted. Attendance then is sent to the SIS. Once processed into the database, attendance reports can be generated.
Guam Department of Education	Teachers record and submit the data to school administration.
Hawaii State Department of Education	Data are collected by the Office of Strategy, Innovation and Performance from the SIS or collected manually through a template.
Iowa Department of Education	Individual LEAs decide the process.
Maine Department of Education	The state-level quarterly attendance data collection and definition of attendance have not changed. LEAs determine locally how attendance will be taken.
Minnesota Department of Education	Working on establishing processes (as of fall 2020).
LEA	**Attendance Data Collection During the COVID-19 Pandemic**
Bossier Parish Schools (LA)	On their virtual day(s), students self-report attendance via the SIS portal.
Fairbanks North Star Borough School District (AK)	Based on state guidance, LEA collects attendance as usual for in-person learning, and all enrolled students are considered present during remote learning.
Jefferson County Public Schools (KY)	Teachers record in SIS.
Metro Nashville Public Schools (TN)	Attendance is measured by login data from the learning management system (LMS) for virtual students and from regular period attendance for those in-person.
Saint Louis Public Schools (MO)	Teachers record absences in the SIS, as they would before the COVID-19 pandemic. Student support teams follow up with those students who have not logged in on a regular basis.

Table 2. Examples of SEA and LEA Attendance Data Collection Procedures During the COVID-19 Pandemic

Chapter Three:
Seat Time and Standards-Based Progression

This chapter considers the key differences between the traditional "seat time" model of attendance and those systems that instead focus on student progression through particular standards.

Traditional definitions of attendance, and related data collection methods, have focused on the concept of "seat time"– the presence of the student in a classroom or school activity. Though requirements may vary–for example, local education agencies (LEAs) may require different numbers of hours of "seat time" in a school day for students to be considered present–the data point is binary, in that a student is classified as either present or absent. Under these models, data related to attendance, such as building counts or chronic absenteeism rates, are based on whether students are physically where they are expected to be. These data do not give information about whether a student is engaged in learning or is making adequate progress.

In recent years, many LEAs and schools have moved toward models of standards-based progression rather than a singular focus on seat time. Under a standards-based model, students are expected to reach defined standards and succeed in particular tasks before moving on to additional lessons. These models not only provide educators with more information about students' learning and academic progress, but they allow students to move at different rates depending on their abilities. This is a shift from a seat time model in which all students move through a unit or lesson on the same calendar.

Time-based attendance measures may sometimes be unsuitable in virtual education settings–students may complete virtual course work after-hours, in the evenings, or during other times when school is not typically in session. For example, in Saint Louis Public Schools (MO), many virtual students logged in and completed assignments during the 2020 Veteran's Day holiday when schools were closed. This offered the LEA an opportunity to review its practices related to engagement and seat time. Reviewing data such as the number of minutes students are engaged in virtual meetings, assignments, and applications can allow LEAs to give students "credit" for activities completed outside of the typical school day.

The actual length of time required for students to demonstrate competency in a course varies, and measures of competency often are better indicators of student success in virtual courses than traditional measures of seat time such as Carnegie Units. As a result, some state education agencies (SEAs) and LEAs have begun tracking competency instead of traditional attendance measures. To shift the focus from attendance to competency, SEAs and LEAs may establish baseline values for a course and determine appropriate assessments to measure student skills and knowledge required for the established course objectives. Such competency measurements eliminate the need to track attendance in the traditional fashion of seat time and minutes.

SEAs and LEAs that employ competency-based measures may need to establish new policies to ensure that students are progressing in virtual courses. Common practices include

- establishing a regular schedule of teacher-student meetings to monitor progress and increasing the frequency of the meetings if needed;
- maintaining timelines for achieving course objectives, and reevaluating and adjusting timelines quickly if students cannot meet objectives; and
- informing parents and guardians of course objectives and timelines so that if objectives are not met within the timeline, the student, parent or guardian, and teacher can adapt the timeline or workload to ensure that the student achieves competency.

Jefferson County Public Schools (KY) has a board policy for graduation requirements that allows the use of performance-based credits in addition to Carnegie units.

Because the virtual and hybrid models used by many agencies during the coronavirus disease (COVID-19) pandemic have made attendance data less sufficient, some educators and data experts have suggested that a greater focus on standards-based progression is needed. If seat time and standards-based progression data are used together, educators can glean information about the type of instruction most effective for individual students and classes overall. The combination can be seen as a return-on-investment measurement of seat time. A student who progresses with less seat time may use fewer school resources and be able to engage in other enrichment activities.

Some experts caution that students are not always engaged when they are in the classroom and they still are counted as present. Changing to mastery versus seat time would result in more stringent requirements for virtual versus in-person attendance.

Chapter Four: **Attendance, Participation, and Engagement Policies and Decisionmaking**

This chapter reviews the importance of well-defined policies for collecting student attendance, participation, and engagement data, and discusses how education agencies approach new situations and key decisionmaking that are informed by these data. Though definitions of attendance and methods of collecting attendance data have been relatively consistent across agencies over many years, the rapid shift to multiple learning models—and the lack of clarity on what "attendance" means within them—has upended these traditional similarities.

For most of the history of U.S. public education, the connection between student attendance and learning seemed clear: A missed school day was a lost opportunity for students to learn. Students who are regularly present and engaged in school achieve at higher levels than students who are not. Research shows that consistent attendance supports student learning and is an important factor in student achievement, while absenteeism is related to lower student achievement. Attendance also strongly affects graduation, dropout, and postsecondary enrollment rates.[6] However, rapid changes during the coronavirus disease (COVID-19) pandemic raised questions about the concepts of attendance, participation, and engagement, and how these different aspects of student learning may differentially affect achievement.

During the COVID-19 pandemic, many education agencies also have realized the increased importance of attendance data as a means of measuring how well teachers and staff are staying in contact with students in virtual or hybrid learning models and ensuring that students' learning and safety needs are being met. Checking in regularly allows local education agencies (LEAs) and schools to verify that students are continuing to engage in school activities, that their parents are involved with their learning as necessary, and that they have the needed materials and access to resources for learning. These concerns have driven policy decisions in many state education agencies (SEAs) and LEAs in terms of how to define attendance data and how it can best be collected to provide critical information.

Though education data leaders recognize the importance of data about attendance, participation, and engagement, they face challenges in collecting and using these data. Some examples include the following:

6 Balfanz, R., and Byrnes, V. (2012). *The Importance of Being in School: A Report on Absenteeism in the Nation's Public Schools*. Baltimore, MD: Johns Hopkins University Center for Social Organization of Schools. Retrieved January 14, 2021, from http://new.every1graduates.org/the-importance-of-being-in-school/.

- **Technical challenges with student information systems (SISs) and learning management systems (LMSs):** Agencies may have had to modify SIS protocols due to changes in collections during the COVID-19 pandemic, which then may affect other systems or add additional burdens to staff who must ensure that data are correctly recorded in each system. Some agencies also have had problems moving data between the LMS and SIS, particularly when one or the other is being used to track virtual education attendance or participation.

When students are using various learning platforms, they may be participating and engaged in a variety of learning opportunities, but the data are not connected with the primary systems used to track and measure attendance.

- **Lack of clarity about data for different learning models:** Agencies have had issues tracking attendance between synchronous and asynchronous learning models, as well as between virtual, in-person, and hybrid models. Allowing LEAs flexibility for how to define and collect data for virtual education or hybrid models—though helpful for the LEA—can lead to concerns about how to capture and align information. Standardization at the state level is difficult when LEAs have been provided flexibility or multiple options.
- **Data from COVID-19 pandemic semesters will not be comparable:** Though data leaders across the country remain committed to collecting accurate attendance data during the COVID-19 pandemic, the necessary changes and adjustments to how these data are being collected mean that they cannot be considered comparable to other years, whether in direct year-to-year comparisons or longitudinal analyses. This not only reduces the usefulness of analyses at the SEA or LEA level, but could affect accountability data reported to the federal level.
- **Need for clear communication about attendance with parents and students:** Many agencies that are employing either virtual or hybrid models are using data collection methods that directly involve the parent or student. For example, a student must use a "check in" function, or a parent or guardian must ensure that their child is logged in for enough hours to be counted present. Therefore, these agencies need to ensure that students and parents or guardians understand their responsibilities. With the number of changes that have occurred rapidly during the COVID-19 pandemic, these communications sometimes have not been successful, and students' information has not been recorded accurately.
- **Difficulties in communicating with students due to technical or security impediments:** As the need for online communication with students has increased within virtual and hybrid learning models, some agencies have experienced impediments that either slow down or temporarily stop online interactions. Many rural areas, for example, do not have the technology infrastructure in place to allow high-speed internet for all of the users who need it for virtual learning. Some agencies have had security issues, such as ransomware attacks or interruption of video calls by hackers. More information on cybersecurity can be found in the *Forum Guide to Cybersecurity: Safeguarding Your Data* (2020) (https://nces.ed.gov/forum/pub_2020137.asp).
- **Coordination of student data across multiple systems:** Managing student logins and access to multiple systems can be challenging. Ensuring interoperability between learning systems and identity management utilities (such as a directory service) is critical for efficient username and password management, and for easy and consistent access to learning tools.

- **Consistency in data definitions:** Even if data leaders can quickly devise a definition for a data metric, interpretations can vary between LEAs, across an LEA, within a school, or even within a grade level, especially when there is little time for professional development. One potential consistency issue is similar to the concept of inter-rater reliability, whereby each teacher could have a different sense of what "engagement" means depending on how vague the LEA definition is. One teacher might think that a single phone call is enough to be considered engaged, while another believes the students should have completed work, logged in, or attended an instructional video conference. If teachers' interpretations of data definitions do not support each other, the definition is not precise enough and must be refined.
- **Using data to identify struggling students:** In the shift to virtual or hybrid models, data systems were modified quickly, which required process changes. Without previously established processes for reviewing data on distance learners, schools may risk not properly identifying students who are not adequately participating or engaging in learning.

Issue in Focus: Making Data Decisions for Early Warning Systems

One data tool that has been affected by challenges to collecting and using attendance data is the early warning system (EWS). An EWS is a system that identifies students who are at risk of dropping out of school.[7] This type of system applies predictive analytics to student data to determine student risk level in relation to predefined indicators and thresholds. Because one of the key data points in a typical EWS is student attendance, many education agencies have had to consider how changes to attendance data collection may in turn affect the functioning of their EWS. Fairbanks North Star Borough School District (AK) uses both a "static" EWS, created in August of each year using the previous two school years' data, and a "live" EWS, which uses two years of data, plus the current attendance and grades data. The live EWS is affected by the LEA's choice to record 100 percent attendance during remote learning. The EWS risk levels will be underestimated because of the inaccurately high attendance rates. Because of this issue, the data team has advised staff across the district to be cautious with the live risk level and to potentially use the static risk level, which had adjustments to the attendance rate in school year (SY) 2019-2020.

In Jefferson County Public Schools (KY), the data team has received notice from the SEA that its EWS will be adjusted to include participation (rather than attendance) data where applicable. The SEA's EWS has four main areas:

1. Attendance (including absences, tardies, percent attendance, and chronic absentee status)
2. Stability (including years enrolled at school, years enrolled in the district, time at current address, overall number of addresses, enrollment status, and number of portal logins)
3. Behavior (behavior incidents and suspensions)
4. Curriculum (transcripts and grades)

During the COVID-19 pandemic, LEA leaders recognized the variation in quality of participation data at the district and school levels, which made data quality—particularly that of attendance scores—and accuracy of the tool into challenging subjects for evaluation. The SEA has provided guidance that the stability category is likely to be more useful for evaluating a student's risk level than attendance during this time.

7 National Forum on Education Statistics. (2018). *Forum Guide to Early Warning Systems* (NFES2019035). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved on January 14, 2021, from https://nces.ed.gov/forum/pub_2019035.asp.

Lessons Learned

The COVID-19 pandemic has caused many challenges for education agencies, but SEA and LEA data leaders also acknowledge that the crisis has allowed some important lessons to emerge. Agencies are reconsidering the meaning and relevance of attendance data, and thinking more deeply about how to define and collect these data in ways that more accurately reflect student engagement and achievement. The need for widely available virtual learning presented issues in access and usability for schools and students, but also led to crucial improvements in technology and communication with stakeholders. Some students even found that they thrived in virtual learning environments in ways they had not in the traditional classroom. Finally, teachers, administrators, students, and parents have come together in myriad collaborative ways to ensure that quality learning still can take place even when the delivery of lessons may have radically changed.

As SEAs and LEAs recover from the widespread disruption caused by the COVID-19 pandemic, it is expected that agencies will need to consider and address many data-related issues that are beyond the immediate focus of this resource. For example, learning loss is an important issue that deserves consideration but is beyond the immediate focus of this resource. Similarly, other types of education data, such as assessment data, are important but outside of the scope of this resource. Crises, in some form or another, will continue to disrupt the lives of students, schools, education agencies, and communities. It is hoped that the actions undertaken by education data administrators and staff during the COVID-19 pandemic will inform future planning that can benefit us all during future crises.

The scale and severity of the COVID-19 pandemic—including the impact on schools and students—has evolved over the course of 2020 and into 2021. Though most K-12 education stakeholders look forward to the shift back to earlier processes, there are many aspects of education—both big and small—that are likely to be changed forever. The need for and interest in virtual and hybrid learning models is expected to continue, both permanently and for use temporarily during a crisis. This resource is intended to help education agencies collect and use attendance, participation, and engagement data as they temporarily use, expand, or permanently adopt new learning models. Looking ahead, education leaders must determine the need for attendance, participation, and engagement data in different learning models and think strategically to design and implement plans that both allow for the collection of these data and the actionable use of these data to improve student learning.

Chapter Five:
Case Studies from States and Districts

This chapter provides case studies from states and districts that highlight how education agencies are handling the collection and use of attendance data during the coronavirus disease (COVID-19) pandemic.

Hawaii State Department of Education

> **Agency Information**
>
> Number of public schools: 294
> Estimated enrollment: 180,800

The Hawaii State Department of Education (HIDOE) is a statewide school district composed of 15 complex areas. Since the COVID-19 pandemic began to affect schooling in spring 2020, the HIDOE has made decisions based on information provided by the Hawaii State Department of Health (DOH) and the Centers for Disease Control and Prevention (CDC). The state began the 2020-21 school year with most schools providing education via distance learning, with an expectation to have this model in effect for at least the first four weeks of the school year. Based on high COVID-19 numbers, this plan was later extended for the entire first quarter. Schools can offer learning hubs on campus to provide in-person educational programming for vulnerable students, including those who require specialized learning services, those who need additional academic support, those in key transition grades, and those who lack internet access.

The state is moving toward shifting students back to in-person learning at least part of the time. The number of students returning to campus will be determined by the impact on the workforce, modifications to facilities use (for example, only using classrooms with proper ventilation and space for social distancing), and other mitigating factors. Target start dates for moving between learning models will be determined by leaders in complex areas (groupings of two to four complexes; each complex includes a high school and the elementary and middle schools that feed into it) and schools, and each school's selected model will be phased in. At least two weeks' notice will be given to parents and the school community. The DOH suggests that complex areas and schools use the system in figure 1 to make decisions. A minimum of two weeks of data should be reviewed before considering transition to a new learning level. Another factor to consider when deciding to move toward an in-person learning model is the school's ability to put in place mitigation practices. If a multilayered mitigation approach can be implemented successfully, schools can consider moving toward in-person learning models ahead of what is indicated by the threshold criteria.

DOH Learning Model Parameters:

7-day Daily Average per 100,000 population, by Island*	Percent Positivity¶	Consider the following Learning Model
0-2.0	0-0.99%	In-person learning
2.1-5.0	1.0%-2.49%	In-person learning for elementary students; blended learning for secondary students
5.1-10.3	2.5%-5.0%	Blended learning for students
10.4-15.4	5.1%-7.5%	Blended learning for elementary students; learning from home for secondary students
15.5+	>7.5%	Learn from home

* Hawaii metrics for school reopening will be posted every week at: https://health.hawaii.gov/coronavirusdisease2019/school-guidance/

¶ The testing positivity rate is defined as the percentage of all tests reported that are positive. Tracking percent positivity along with the number

Figure 1. Learning Model Parameters

SOURCE: Hawaii State Department of Health. (2020). *Guidance for Schools: COVID-19*. Retrieved November 16, 2020, from https://health.hawaii.gov/coronavirusdisease2019/files/2020/10/COVID-19-Guidance-for-Schools-Updated-Oct-18-202014209-1.pdf.

Attendance Data

Throughout the fall 2020 semester, data collection for attendance, as well as various aspects of student learning, have varied by complex area, school, and individual teachers. Because the source systems were not originally designed to collect different means of attendance for varied learning models (virtual, hybrid, or face-to-face), the agency initially had to resort to collecting a standard present-absent binary attendance measure across different models. Later, the data team added an identifier to each student's record to indicate which learning model they are operating under, and schools have been able to define what "present" means for each model. Teachers are expected to collect daily attendance. Complex areas or schools may make different decisions for collection; under distance learning, for example, one school may require a single check-in daily, while another may require multiple check-ins by students throughout the day. Additionally, because the student information system (SIS) defaults a student's status to "present," a school that is collecting more accurate data may appear to have greater problems with absenteeism than a school that does not record precise daily data, notwithstanding the actual attendance of students.

HIDOE also is working to resolve inconsistencies with regulated guidance on documenting and collecting attendance data for virtual learning. The state released a guidance document in October 2020 that defines "absence" in the different learning contexts but allows schools to determine details such as "the amount of time and/or required check-ins, and/or task completion and/or other metrics determined by [the] school."[8] Previously, if a student was absent more than half of the day, they would be marked absent. Under the new guidance for distance learning, the amount of time students must spend participating in class to be counted as present is not defined. The SIS includes a gradebook for teachers to record student participation, but this feature is optional.

8 Hawaii State Department of Education. (2020). *School Attendance Procedures.*

All of these variations complicate the task of comparing data, whether across complex areas or schools, or with data from previous years. The agency is discussing how to handle this issue and how the data from this year may be informative and relevant. The Hawaii State Board of Education resolved that there must be a report on academic progress and learning gaps during the time of the COVID-19 pandemic's influence on delivery of education to students. The first report, published in November 2020, includes chronic absenteeism rates and gaps in instruction. With this data, the agency is able to identify schools that are not taking meaningful attendance and also expose gaps in learning in particular subjects or by particular groups of students.

Challenges and Lessons Learned

The challenges faced by data teams and administrative leaders in trying to collect meaningful data during the COVID-19 pandemic have allowed these key players to identify changes they would make to be prepared for future crises. For example, the fact that many schools in Hawaii did not have bundled productivity software, necessary for collecting data in temporary spreadsheets, was not discovered until the state's response to the COVID-19 pandemic was underway. Additionally, when required to teach virtually, some teachers did not have laptops or home internet access that would allow them to do so. These issues compounded the struggle for a district that already did not have structures in place for widespread distance learning. For these reasons and others, data leaders realized the importance of including complex area superintendents and school administrators in planning groups, where information like that above is most needed.

Silver Linings

Though the agency has faced challenges, HIDOE also has had silver linings emerge through these times. First, the need for nearly universal distance learning has motivated the district to expand and improve the quality of and access to this option for Hawaii's students. This has allowed the SEA to more easily reach some students who had traditionally struggled with regular school attendance (such as students in very remote areas or those with family commitments that took them out of school). District leaders expect that virtual learning, at least at some level, will remain in the district after the COVID-19 pandemic.

Additionally, some of the data collected during the crisis have brought new and useful insights regarding student participation and engagement. Because they have not been able to simply collect traditional "present/absent" attendance data as a means of assessing student involvement, schools and teachers have been encouraged to think of the concepts of participation and engagement more broadly and creatively, and have been able to identify gaps in learning that may not have otherwise been seen. Though district leaders acknowledge that deep analysis still is needed to fully comprehend and use the more expansive data they have been collecting, they note that teachers and administrators have been positive about continuing to collect more thoughtful data points. The COVID-19 pandemic has afforded the opportunity for the department to re-think and modernize what it means for students to be present, and what school attendance means. During these unique times, Hawaii's education leaders have come to the general agreement that attendance should be based on a student's mastery, achievement, and effort put forth on tasks, rather than a finite amount of "seat time."

Iowa Department of Education

As Iowa prepared for the school year (SY) 2020-21, all local education agencies (LEAs) were required to submit a "Return to Learn" plan to the Iowa Department of Education. These plans had to include strategies for virtual education and also could address face-to-face and hybrid options. When the legislature reconvened, members decided that the preferred method of instruction was face-to-face. However, this directive was refined to a requirement of 50 percent face-to-face instruction unless the governor implemented a health proclamation that included restrictions or shutdowns. As COVID-19 rates increased across the state, the requirements were further refined to state that if an LEA's student absentee rate is above 10 percent and the COVID-19 positivity rate is between 15 and 20 percent, the LEA can submit a virtual-only waiver application to the state education agency (SEA) for review and possible approval.

Agency Information

Number of public schools: 1,318
Estimated enrollment: 512,000

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Public Elementary/Secondary Education Survey," 2017-18, v.1a. Retrieved November 17, 2020, from https://nces.ed.gov/ccd/elsi/.

Due to this directive and the changing COVID-19 rates in the state, LEAs have been transitioning among all three methods (virtual, face-to-face, and hybrid). As of November 2020, most LEAs had opted for a hybrid model. The number of LEAs that are fully virtual changes from week to week because the virtual-only waivers are valid for two weeks (with the possibility of extension). Additionally, within an LEA, a building or class may be quarantined and operate online if there is COVID-19 exposure within the building or class.

Attendance Data

As Iowa's LEAs have moved among different learning models, the SEA has provided guidance for tracking and recording attendance while remaining committed to allowing flexibility at the local level. SEA guidance notes that for any day that is counted as an instructional day, attendance must be collected and recorded consistently within the LEA. The SEA has not mandated which people (such as teachers or students) must collect or report the data, instead requiring only that the data be entered into the SIS. Therefore, if an LEA were tracking the logins of students under a virtual model, a member of the data staff could pull data from the learning management system (LMS) to identify which students should be marked as present or absent.

In the document *Attendance and Absenteeism Guidance*,[9] the SEA offers suggestions for how an LEA might collect attendance in a virtual or hybrid model. They suggest that LEAs might use the following options:

- Parent or student attendance tracking: A student or parent marks the student present during remote learning days.
- Minimum login time requirements: The LEA's LMS or other technology tracks how long a student is logged in to lessons during remote learning days.
- Specific task completion: Students are required to complete a series of regularly scheduled tasks during remote learning.
- Minimum lesson, or unit, completion: Student attendance is tied directly to what the student accomplishes or the work they produce over a given period.

9 Iowa Department of Education. (2020, September). *Attendance and Absenteeism Guidance*. Retrieved April 19, 2021, from https://educateiowa.gov/documents/pk-12/2020/09/attendance-and-absenteeism-guidance.

Ultimately, how attendance will be collected is left to the discretion of each LEA. This flexibility has been useful for LEAs, but the SEA realizes that there will be data implications, particularly for longitudinal data. The data team will know the specific impacts of this flexibility once attendance data are closely reviewed following the winter 2020 and spring 2021 collections.

Challenges and Lessons Learned

Iowa faced additional challenges beyond the COVID-19 pandemic, in that the state was hit by a damaging derecho (a widespread and intense windstorm) in August 2020. Some LEAs could not start SY 2020-21 until late September because so many buildings had been damaged. Many students were displaced, with low-income and immigrant students often suffering more significant disturbances to their normal lives. The LEAs affected by the derecho were allowed to go 100 percent online since they did not have facilities for in-person learning.

LEAs and schools have also struggled through issues related to periodic quarantines, shutdowns, and varying learning models from week to week. One LEA had a teacher shortage due to a required quarantine, which led district leaders to apply for a waiver for virtual education.

In spring 2021, the SEA made data collection easier by focusing temporarily only on those data elements that were essential. Following approval of a U.S. Department of Education accountability data waiver in spring 2020, the SEA reduced the amount of required data from LEAs. Additionally, though its data system typically has 700 validations, the data team changed many of these to warnings rather than errors. This simplified the process and allowed LEAs to submit the best data they had, even if the data did not meet regular quality standards. In fall 2021, all data elements and validations were restored.

Silver Linings

The flexibility offered by the SEA for the LEAs, in terms of how to collect attendance data, as well as which learning model to use at a given time, has allowed the LEAs to adapt to multiple changes across spring 2020 and SY 2020-21 and to make the best local decisions that they can. For example, one LEA decided that though the county in which it is located had a 20 percent COVID-19 positivity rate, the LEA did not need to apply for a waiver for virtual education because the rate of infection within the LEA was 1 percent. Rather than potentially changing the learning model for students in two-week increments, they prepared to quarantine at the building or class level if necessary.

On the data front, many LEAs have chosen to record additional attendance codes within their data systems. These decisions align with local choices regarding learning models and attendance data collection, and allow the districts to collect the data most relevant to their locations.

Finally, Iowa has found that the inclusion of widespread virtual education, whether in hybrid or virtual-only models, has had unexpected benefits for some students. In some cases, the virtual option improves attendance and student engagement. Other students have reported enjoying the greater autonomy of virtual learning: For example, some advanced students thrive when allowed to move forward more rapidly or to expand their learning topics and materials. The realities of virtual education have also—perhaps paradoxically—increased the connections between some students and their teachers. Knowing that they will not see them face-to-face, teachers are reaching out frequently to keep students engaged. If a student does not show up for online learning, teachers are working hard to ensure that they connect with them and keep them involved.

Bossier Parish Schools (LA)

When the 2020-21 school year began, all students in Bossier Parish Schools (LA) were assigned teachers on their home-school campuses, where most teachers had a combination of virtual and in-person learners. Parents could choose for their children's learning to be fully virtual, or they could choose an in-person option. At the prekindergarten-5th grade levels, students were in person every day, while meeting guidelines for class sizes during the COVID-19 pandemic. For 6th-12th grades, students had a hybrid of in-person and virtual learning, with each of two cohorts (divided alphabetically into group A and group B) attending in person every other day.

Agency Information

Number of public schools: 33
Estimated enrollment: 22,600

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey," 2018-19, v.1a. Retrieved November 17, 2020, from https://nces.ed.gov/ccd/elsi/.

This split model was necessary for schools to reopen, but local education agency (LEA) leaders recognized that it would not be sustainable for the long term. In particular, it was difficult for teachers to have both virtual and in-person learners simultaneously. The LEA formed a committee to decide how to better support teachers and reviewed a wide range of data to inform the decision. Agency leaders decided to form a virtual academy and obtained teachers for this new option, some of whom volunteered, and some who were selected based on their data for grade levels and subject areas.

As of November 2020, the agency is transitioning to a system of fully virtual or in-person attendance for all teachers and students, ruling out the split model. Students and their parents or guardians were asked to commit to either stay virtual or come back to campus. Those students who choose the virtual option will be enrolled in a new virtual academy, where they will work with virtual-only teachers. The school clerical staff needed to de-roster all of the virtual teachers from students who will be learning in-person and then assign those students to remaining in-person teaching staff. Conversely, the new virtual academy had to schedule both virtual students and virtual teachers to appropriate subjects.

Attendance Data

In the absence of state policy updates regarding attendance reporting, Bossier Parish Schools (LA) is operating under the previously established policy, in which students are marked either present or absent for any enrolled school day. Attendance definitions are codified in state legislation, but there is not currently a modified attendance definition for virtual education. However, one thing that has changed during the COVID-19 pandemic is the implementation of the agency's new SIS, which happened to be scheduled for rollout during fall 2020. The new SIS allows for self-reporting of attendance and provides a time window (the LEA chose 6:00 am - 9:00 am) for students to log in to their portal account and mark themselves as present or absent. After the self-reporting window closes, the attendance secretary reviews the 100 percent virtual cohort and marks absent any student who did not self-report as present. If a student or their parent or guardian notifies the attendance office that the student made an error and did not self-report, the office can reconcile the data point. District data leaders acknowledge that this system does not measure student engagement, but that it does meet traditional state reporting requirements for attendance.

Bossier Parish Schools (LA) also is developing new educational plans for both in-person and virtual students. Based on guidance from a state committee,[10] the LEA is following policies regarding student "contacts," which include new data elements and expectations for daily

10 Louisiana Department of Education. (2020). *Louisiana Strong Start 2020*. Retrieved April 19, 2021, from https://www.louisianabelieves.com/resources/strong-start-2020.

contact between teachers and students. The vendor for the new SIS developed a module for recording teacher-student contacts that the LEA rolled out in December 2020. The module generates contact logs that assist in indicating student non-participation and student non-engagement, with a trigger feature for administrative intervention. Data leaders report that this module quickly proved useful for determining engagement outside of attendance.

Because the nature of data collection for issues such as attendance or participation has changed, data leaders acknowledge that data collected in 2020 (and potentially beyond, as the COVID-19 pandemic continues) may not be comparable for longitudinal analyses. They recognize that similar to student data collected in Louisiana in the aftermath of Hurricanes Katrina and Rita, data collected during the COVID-19 pandemic necessarily will have an asterisk to denote a deviation from typical longitudinal data. More information on Louisiana's experience tracking displaced students can be found in the *Forum Guide to Planning for, Collecting, and Managing Data About Students Displaced by a Crisis* (2019) (https://nces.ed.gov/forum/pub_2019163.asp).

Challenges and Lessons Learned

As noted above, the LEA was scheduled to implement a new SIS well before the COVID-19 pandemic, and its introduction happened to coincide with this crisis. This placed additional challenges on varied stakeholders, as teachers, administrators, students, and data teams all needed to learn to work with this new system while they faced questions of how to maintain learning during COVID-19 restrictions. Data leaders note, for example, that transitioning to self-reporting attendance data might have been easier for students and their parents if they had not also been learning to use the new SIS. Aware that any changes in data collections can be a struggle, the data team worked to support the transition through webinar training, direct support (such as phone, email, chat, and videoconferencing), and helpguide links that are updated as new questions arise.

Silver Linings

Though the timing of the SIS implementation was challenging, the LEA did find that because they were working with a new vendor, the vendor team was proactive in creating and implementing solutions. This may have been more difficult if they were not working with the team at the exact point of the COVID-19 pandemic crisis.

Additionally, the need for widespread virtual learning and the gradual buy-in of students and parents as the system was amended and improved may lead some students to stay in virtual education even after the COVID-19 pandemic. This may be a better learning option for some students who would not have had it available when the LEA's virtual options were more limited. Additionally, the LEA had been losing students to a state public charter virtual academy. With their virtual options more expansive and appealing, more students may stay in Bossier Parish Schools (LA) for their education, thus allowing the LEA to retain both the students and the funding that follows them.

Fairbanks North Star Borough School District (AK)

Agency Information

Number of public schools: 36
Estimated enrollment: 13,300

Source: https://www.k12northstar.org

When Alaska's governor announced that public schools would be shut down in March 2020, the Fairbanks North Star Borough School District (AK) was on spring break for SY 2019-20. The governor's mandate kept schools closed for two weeks, and then the district became fully virtual. Education in the district remained virtual into the fall semester of SY 2020-21, and the district began to phase students back in to in-person education gradually. Students in special education, with high needs, or technology connectivity issues were phased in first. During the larger "phase in" of in-person education, the district expanded the model over a 3-week period, with elementary students coming back in Week 1, middle school students in Week 2, and high school students in Week 3. By spring 2021, the district had approximately 50 percent of students opting to attend in-person, while the rest attended virtually.

Attendance Data

When schools in the state became virtual, the Alaska Department of Education & Early Development decided that LEAs should follow the attendance data collection policies of correspondence schools in the state, which consider enrolled students to be in full attendance. Therefore, Fairbanks North Star Borough School District (AK) has been recording 100 percent attendance during the COVID-19 pandemic.

As the LEA has been phasing students back into varied levels of in-person learning, district leaders are working on how to best collect attendance data for students in different learning models. Complications arise when students move between models, such as if an in-person student has to move to virtual learning because they test positive for COVID-19, or they have been in close contact with someone who tested positive. If the school is made aware of the student's situation, they will be counted as present within the virtual model. However, if this information is not clarified with the school, the student would be considered absent even though they were participating in virtual learning at that time.

The SEA convened an advisory group to determine how to best collect attendance data during the COVID-19 pandemic. The group considered issues such as

- how to measure attendance in hybrid models;
- how to measure and compare attendance data in synchronous versus asynchronous virtual instruction;
- how chronic absence data can be collected and reported during the COVID-19 pandemic; and
- how changes in data collection will affect data reported to the state's accountability system.

The SEA's guidelines for reporting student attendance in virtual education have required adjustments to systems and reports that rely on attendance data. For example, Fairbanks North Star Borough School District (AK) uses student attendance as one of eight early warning system (EWS) indicators. Rather than use attendance data from the time when student attendance was being reported as 100 percent, the system instead is using attendance data from SY 2018-19 and the first three quarters of SY 2019-20. More information on the district's EWS can be found in the *Forum Guide to Early Warning Systems* (2018) (https://nces.ed.gov/forum/pub_2019035.asp).

Challenges and Lessons Learned

Because educators in the LEA wanted to track student engagement during virtual learning, the data team created a voluntary student engagement code, with the intention of it being used informally. For example, teachers can track various student activities as a general measure of student engagement, such as participation in videoconferencing; completion of schoolwork, tests, or exams; or correspondence with the teacher. Challenges arose when the school board wanted to use those data to create an engagement report. Data leaders in the LEA explained the data were not consistently reported or comparable between classes (due to variations in teacher use) or to other measures (such as attendance). As a more accurate means of information, the data team provided basic counts of codes and contact logs from various programs, but made clear to the school board that these data should not be interpreted as attendance measures. In retrospect, data leaders suggest that they should have been more explicit in defining the term "student engagement" to standardize the measure across the district. They also note that creating a student non-engagement code might have been more useful for different stakeholders: It would have provided a way for teachers to track concerns about non-engagement if desired, and parents could have had opportunities to follow up on these concerns with their children.

The LEA also has faced some challenges in ensuring that varied types of data are accurate during the COVID-19 pandemic. One of these challenges relates to a shift in how courses are being scheduled and taught for secondary students during the crisis. To simplify the details of virtual learning, the LEA decided that secondary students should have limited numbers of courses but have the timelines of those courses accelerated. Put simply, students take two quarters worth of coursework for a particular course within a single quarter but take a reduced number of courses each quarter. This reorganization has affected data collection related to student funding, as schools are not necessarily implementing the reworking of schedules in the same ways. Additionally, the district has changed the calculation of full-time-equivalent (FTE) for secondary students. Previously, each course was considered 0.25, so a student would be 1.0 FTE if they took at least 4 courses. Under the accelerated course system during the COVID-19 pandemic, each course is considered 0.5, so a student is 1.0 FTE if they take at least 2 courses. This has caused some confusion for students in understanding their status, especially if they are taking some courses virtually with the district and others via correspondence programs outside the district.

Silver Linings

Though Fairbanks North Star Borough School District (AK) has faced data collection challenges in SY 2020-21, many of the questions the LEA is facing have allowed data leaders to consider important questions that could improve data collection overall. For example, the LEA has discussed the differences among attendance, participation, and engagement, as well as how the data for each of these should be collected and used. The data team has explained to stakeholders that attendance data comparable to that collected during in-person learning cannot be collected while the LEA is engaged in its virtual learning model, for several reasons: for example, deviations from typical school day scheduling, as well as the prevalence of asynchronous learning. The school board is considering whether a better option would be to measure engagement, with a clearly defined student engagement code that would allow consistency across the district.

The COVID-19 pandemic also has provided an opportunity for stakeholders to understand why and when flexibility may be needed in data collection and how necessary flexibility may affect data interpretation. As the LEA creates new codes to accommodate the current learning models, the data team also is proactively considering and adjusting how data will be collected in the future.

Jefferson County Public Schools (KY)

Jefferson County Public Schools (JCPS) (KY) provided a fully virtual learning model in the fall semester of SY 2020-21. The LEA has a phased-in approach, with elementary students beginning in-person instruction first in March, followed by middle school students and high school students in April. Determining the start date for this phase-in was based on several factors, including: (1) Jefferson County data provided by the state government indicating a downward trend; (2) the local rate of positive test results for COVID-19; (3) a review of quarantine data; and (4) the number of staff who have received a vaccination. Families can choose to participate or to enroll in a virtual academy through the remainder of the school year. As of March 2021, 64 percent chose in-person instruction, and 36 percent chose the virtual option.

Agency Information

Number of public schools: 170
Estimated enrollment: 98,000

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey," 2018-19, v.1a. Retrieved November 17, 2020, from https://nces.ed.gov/ccd/elsi/.

Attendance Data

Before the COVID-19 pandemic, attendance was collected in a traditional, "seat time" fashion, in which elementary schools took attendance one time each day before the start of instruction, and middle and high schools took attendance by class period. Both levels were required to maintain a pupil entry and exit log at each school. For SY 2020-21, the Kentucky Department of Education (KDE) has required districts and schools to record participation for all students in lieu of recording attendance and has provided guidance about how to record participation.[11,12] The SIS used to track attendance and participation data is managed by KDE and used across the state by all Kentucky public school districts. New data elements were introduced to track hybrid learning models.

Kentucky uses the term *non-traditional instruction* (NTI) as an umbrella term for instruction that occurs in places other than the traditional classroom, which includes the virtual learning model during the COVID-19 pandemic. Daily participation during NTI may be in real time during the school day or at times outside of normal school hours. Daily participation is considered the measure of the interactions between teachers and students, and must include at least one of the following:

- one-on-one video communication or phone calls between teacher and student (or teacher and parent with younger students or students with special needs);
- group video communication or phone calls between the teacher and the whole class or small groups of students within a class;
- student time logged into an LMS completing assignments; or
- submission of paper-based assignments for students in a non-digital, non-traditional setting.

LEAs in Kentucky are required to record participation in the statewide SIS for each instructional day. In JCPS, teachers can record student participation up to 7 days after the actual school day.

11 Kentucky Department of Education. (2020). *Daily Participation and Non-Traditional Instruction*. Retrieved December 15, 2020, from https://education.ky.gov/comm/Documents/Participation%20Guidance%20FINAL.pdf.

12 Kentucky Department of Education. (2020). *2020-2021 Participation Tracking in Infinite Campus (IC)*. Retrieved December 15, 2020, from https://education.ky.gov/comm/Documents/COVID_2020-2021_Participation_Tracking_in_Infinite_Campus%20FINAL.pdf.

The LEA also is tracking student engagement through various metrics, such as LMS logins and participation on other technology platforms. However, data leaders still are working to operationally define engagement across activities and platforms, as well as to clarify necessary technical support to ensure the data are accurate.

Collaborating for Engagement

As JCPS manages the challenges of instruction and data collection during the COVID-19 pandemic, the LEA has received support through multiple collaborations with outside partners. For example, a partnership with an education consulting firm helped create "nudge" reports for non-participating students; these reports are individualized for each student and include links to resources available in the LEA's NTI 2.0 Family & Community Toolkit. The LEA also collaborates with community organizations as they implement learning hubs where students and families can receive a variety of services.

The LEA's Pupil Personnel Attendance Support Teams are partnering with a large health care company in the area to provide the JCPS 360° Student & Family Support Center. Services include NTI 2.0 platform and log-in help, special education assessments and screenings, school choice assistance, translation assistance, physicals, and social supports from the Louisville Metro Office of Resilience and Community Services. The Pupil Personnel Attendance Support Teams collaborate weekly via school support visits and team meetings with all local school attendance teams to provide participation data and develop multi-tiered systems of support for non-participating students. School and district support teams can leverage participation data to provide targeted, differentiated supports to students.

Finally, JCPS received a re-engagement grant from KDE. The grant is focused on providing specific, targeted supports and interventions for students who have a prior drop-out status, are at risk of dropping out, or have been unreachable since the COVID-19 shelter-at-home orders. The primary aim of the grant is to increase the number of students re-engaging in the educational process toward graduation.

Challenges and Lessons Learned

Teachers have reported that it is particularly challenging to track participation on days where there is not synchronous instruction. Many were interested to know whether participation data could synchronize automatically between the LMS and the SIS. Though they found that an automatic sync was not available, the teacher's association developed a tip sheet that allowed them to use the data available in the LMS to streamline the process of marking participation in the SIS. Data leaders note that because the LEA also is tracking student engagement through various metrics, such as LMS logins and participation on other technology platforms, it is critical to establish a comprehensive view of student engagement in terms of both frequency and duration.

Across varied areas, the LEA has created toolkits, portals for students and parents, and guidance documents to assist stakeholders in the challenges faced during district-wide virtual learning. The toolkits provide needed resources to improve access and experiences. Each school has an NTI portal for students that provides access to assignments and instruction, and the district created another portal where families could fill out the traditional beginning of year forms, such as immunizations and permissions. The district created guidance for families to assist them in helping set up their accounts or access the forms. The LEA also is using an app that allows families to communicate directly with their child's school and teachers, and helps to overcome language barriers by allowing them to message each other with translations in multiple languages.

Even with all of these supports the LEA has provided for stakeholders, data leaders suggest that if they had a chance to do things differently, they would like to offer additional opportunities (such as webinars, training, and community outreach) for all stakeholders on how participation is defined, when it is collected, and how it is recorded. They note the importance of all stakeholders having a common understanding of how participation is defined and collected, to avoid data inaccuracy and potential equity issues.

Silver Linings

Data leaders in JCPS report that while there have been many challenges during the COVID-19 pandemic, some positive perspectives have emerged from the related changes. First, the transition from tracking attendance to tracking participation has brought a paradigm shift: They have moved from thinking in terms of traditional seat time to thinking more about the interactions between teachers and students. Given that those interactions will vary based on whether the student is learning in person or is participating remotely in instruction, they have realized that staff need to be flexible in providing different learning opportunities to students, so that participation can be demonstrated. Because daily participation during NTI may be at times outside of normal school hours, staff also need to be flexible in setting up a system by which they can account for that type of participation.

Additionally, the LEA has found that virtual learning has provided new opportunities for differentiated instruction and progression. Participation is a measure of a student's engagement in the instructional process, rather than the traditional seat time approach. Leaders anticipate that more schools will take advantage of performance-based opportunities when JCPS returns to in-person instruction.

Metro Nashville Public Schools (TN)

When SY 2020-21 began, all students in Metro Nashville Public Schools (TN) were in a virtual learning model. The LEA planned to phase students back into in-person learning gradually, beginning with elementary students, and moving through high school. High school students were not scheduled to return to in-person classes until the second semester. Parents were able to choose whether their children would return to in-person learning or remain in virtual learning for the school year. The LEA began the phase-in process for those students returning to the in-person model, with elementary students phasing back in October. However, increases in positive COVID-19 rates in the state stopped the phase-in process, and as 2020 ended, all students had returned to the virtual model.

Agency Information

Number of public schools: 169
Estimated enrollment: 85,000

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey," 2018-19, v.1a. Retrieved November 17, 2020, from https://nces.ed.gov/ccd/elsi/.

Though the LEA's goal was to have teachers work in either the virtual or in-person model (rather than balancing both), challenges have arisen as students or staff members received COVID-19 diagnoses: Some teachers became ill, while others had to be quarantined due to exposure to students affected by COVID-19.

Attendance Data

Traditionally, Metro Nashville Public Schools (TN) takes daily attendance (by day for elementary students and by each class period for middle and high school students), and students must be present for at least 3.5 hours to be counted as present for the day. In the virtual model, attendance data are not based on minutes of participation; virtual student attendance is measured by reviewing login and student activity data stored in the LMS used to deliver instruction. If a student does not log in and actively engage in learning opportunities at any

time during the day, that student is identified on a baseline report generated by the LMS. The attendance secretary marks students who have not logged in as absent. To verify the accuracy of the overall data, teachers are expected to review the login reports and report any students who participated in class activities but did not log in to the LMS. The status of these students then is adjusted to present. This additional verification is needed because some student interactions do not appear on the LMS report. For example, a student may have used the communications platform to do group work with other students but not logged in to the LMS. Because these systems do not automatically synchronize these data, an extra check is needed to ensure that students are not erroneously marked absent.

Challenges and Lessons Learned

An immediate challenge Metro Nashville Public Schools (TN) faced in SY 2020-21 was student scheduling in the SIS. Students are assigned in the SIS to a learning model (virtual or in-person), and attendance is populated automatically based on their learning model. In-person students are given the regular attendance code "P" for present, while virtual learning students are recorded present with a "D" (to identify distance learning). As students were phasing back to in-person learning, their grouping would change, but this proved challenging if students became ill or needed to quarantine. Data leaders needed to sort out how to handle students moving between the models, as well as what was needed in terms of scheduling teachers and other staff.

The LEA also has experienced challenges moving the data between the LMS, the SIS, and other platforms. Automated transfer of the attendance data has not been possible, so manual processes have been established that may increase the chance of human error. Every morning, a flat file is compressed and developers create a report in the LEA's data warehouse. The director of attendance has reworked the LEA's traditional data procedures (including overriding the class period attendance collection) to create accurate reports of attendance under the SY 2020-21 learning models. When problems arise in this movement of data, the director and the data team must identify whether they are district-wide or specific to an individual school, and readjust accordingly.

Additionally, it has been confusing for teachers and data leaders to clarify participation and engagement through multiple systems and methods (such as the LMS, the communications platform, or phone calls from teachers), as well as in synchronous versus asynchronous learning. District leaders want to support students by being flexible and inclusive of the various ways in which students may be engaged or participating, but this makes having a standardized way of tracking the data complicated.

Though data leaders in the LEA note that prior experience with helping families during crises has allowed them to handle the challenges of the COVID-19 pandemic as best they can, they also have identified ways that some of these challenges could have been alleviated. They suggest greater system integration and including both information technology and curriculum experts in the planning process. Having all affected parties involved from the beginning could allow the creation of more sustainable solutions for an ongoing crisis, rather than short-term fixes. (For more information on disaster recovery teams, please see the *Forum Guide to Planning For, Collecting, and Managing Data about Students Displaced by a Crisis* (2019) https://nces.ed.gov/forum/pub_2019163.asp.)

Though data leaders in Metro Nashville Public Schools (TN) have faced challenges in collecting and managing data during the COVID-19 pandemic, they also have found that the steps they have taken to ensure accurate and useful data have helped stakeholders understand that recording and reporting attendance is not a simple process. As they work to automate as much as they can to reduce the burden on teachers, they emphasize that greater interoperability among systems is needed, as it could reduce the need for workarounds.

The struggles faced during the COVID-19 pandemic also have allowed LEA leaders to consider attendance and engagement more thoughtfully, with a goal of addressing these concepts once this crisis is over. The director of attendance notes, for example, that chronic absenteeism is a sign that greater support and services may be needed for that student. Even when students are in school, some may be present physically but not mentally engaged. LEA leaders plan to do more to focus on these engagement levels and ensure that students' needs are met, whether academic, social-emotional, or practical. The LEA also has found that some students have improved their attendance and grades while in the virtual learning model, possibly because they are not facing the same barriers to success that they did while in in-person school. The LEA is likely to offer more virtual options for students in the future based on these data.

Moving forward, LEA data leaders expect to need more detailed coding systems to identify concerns and needed supports related to attendance and engagement, whether in terms of day-to-day data collection or the LEA's EWS. The same data are flowing through the EWS during the COVID-19 pandemic, but the data team is aware that the context has changed. For example, more students may be absent during and beyond the COVID-19 pandemic because they must care for a family member. More information on the district's EWS can be found in the *Forum Guide to Early Warning Systems* (2018) (https://nces.ed.gov/forum/pub_2019035.asp).

A more granular coding system potentially could help LEA staff create more targeted interventions. Chronic absenteeism may not have the same roots during the COVID-19 pandemic, and behavior incidents are infrequent in virtual learning. Data leaders still use this information to identify students who need outreach, but the actions taken based on lost instructional time may vary in the SY 2020-21 context. In sum, the categories of data collected remain the same, but the data team knows that the definitions and implications of the data have changed.

References

Citations

Balfanz, R., and Byrnes, V. (2012). *The Importance of Being in School: A Report on Absenteeism in the Nation's Public Schools*. Baltimore, MD: Johns Hopkins University Center for Social Organization of Schools. Retrieved January 14, 2021, from http://new.every1graduates.org/the-importance-of-being-in-school/.

Education Resources Information Center. (n.d.). *Student Participation*. Retrieved January 14, 2021, from https://eric.ed.gov/?qt=Student+Participation&ti=Student+Participation.

Education Resources Information Center. (n.d.). *Learner Engagement*. Retrieved January 14, 2021, from https://eric.ed.gov/?qt=engagement&ti=Learner+Engagement.

Fredricks, Blumenfeld, and Paris, as cited in Fredricks, J., McColskey, W., Meli, J., Mordica, J., Montrosse, B., and Mooney, K. (2011). *Measuring Student Engagement in Upper Elementary Through High School: A Description of 21 Instruments*. (REL 2011–098). Washington, DC: Regional Educational Laboratory Southeast. Retrieved January 14, 2021, from https://ies.ed.gov/ncee/edlabs/projects/project.asp?ProjectID=268.

Hawaii State Department of Education. (2020). *School Attendance Procedures*.

Hawaii State Department of Health. (2020). *Guidance for Schools: COVID-19*. Retrieved November 16, 2020, from https://health.hawaii.gov/coronavirusdisease2019/files/2020/10/COVID-19-Guidance-for-Schools-Updated-Oct-18-202014209-1.pdf.

Iowa Department of Education. (2020, September). *Attendance and Absenteeism Guidance*. Retrieved April 19, 2021, from https://educateiowa.gov/documents/pk-12/2020/09/attendance-and-absenteeism-guidance.

Kentucky Department of Education. (2020). *Daily Participation and Non-Traditional Instruction*. Retrieved December 15, 2020, from https://education.ky.gov/comm/Documents/Participation%20Guidance%20FINAL.pdf.

Kentucky Department of Education. (2020). *2020-2021 Participation Tracking in Infinite Campus (IC)*. Retrieved December 15, 2020, from https://education.ky.gov/comm/Documents/COVID_2020-2021_Participation_Tracking_in_Infinite_Campus%20FINAL.pdf.

Louisiana Department of Education. (2020). *Louisiana Strong Start 2020*. Retrieved April 19, 2021, from https://www.louisianabelieves.com/resources/strong-start-2020.

U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey," 2018-19 v.1a; "State Nonfiscal Public Elementary/Secondary Education Survey," 2017-18, v.1a. Retrieved November 17, 2020, from http://nces.ed.gov/ccd/elsi.

Related Resources

National Forum on Education Statistics Resources

National Forum on Education Statistics. (2020). *Forum Guide to Cybersecurity: Safeguarding Your Data* (NFES 2020137). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved January 14, 2021, from https://nces.ed.gov/forum/pub_2020137.asp.

National Forum on Education Statistics. (2019). *Forum Guide to Planning for, Collecting, and Managing Data About Students Displaced by a Crisis* (NFES 2019-163). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved January 14, 2021, from https://nces.ed.gov/forum/pub_2019163.asp.

National Forum on Education Statistics. (2018). *Forum Guide to Collecting and Using Attendance Data* (NFES 2017-007). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved January 14, 2021, from https://nces.ed.gov/forum/pub_2017007.asp.

National Forum on Education Statistics. (2018). *Forum Guide to Early Warning Systems* (NFES2019035). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved on January 14, 2021, from https://nces.ed.gov/forum/pub_2019035.asp.

Additional Resources

Local Education Agency (LEA) Resources

Fairbanks North Star Borough School District (AK)
https://www.k12northstar.org

Metro Nashville Public Schools (TN) COVID-19 Tracker
https://www.mnps.org/covid-19/covid-tracker