

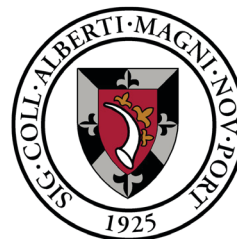


Remote Learning Study

DECEMBER 2022

**Center for Connecticut
Education Research Collaboration**

Partner Institutions





Remote Learning Study

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About CCERC

The Center for Connecticut Education Research Collaboration (CCERC) is a research partnership between the Connecticut State Department of Education (CSDE) and institutions of higher education across Connecticut. CSDE sets the agenda, identifies projects, and allocates funding for CCERC. The University of Connecticut manages funding and provides an administrative team. A Steering Committee composed of researchers from various Connecticut institutions guides the administrative team in developing and approving research projects and reports. Researchers from Connecticut universities and colleges constitute the research teams. The mission of CCERC is to address pressing issues in the state's public schools through high quality evaluation and research that leverages the expertise of researchers from different institutions possessing varied methodological expertise and content knowledge.

CCERC was formed initially using federal relief funds to investigate the impact of the COVID-19 pandemic on learning and well-being and recovery efforts in the state's schools. The partnership was subsequently institutionalized to respond to ongoing evaluation and research needs of the CSDE, provide research opportunities for Connecticut researchers, and foster collaboration across the state's institutions of higher education.





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📷 A mixed-methods audit of Connecticut school districts' emergency response to the COVID-19 pandemic was conducted in fall 2021. This audit was requested by the Connecticut General Assembly in Section 389 of Public Act 21-2ss. (iStock Photo)

Executive Summary

In fall 2021, the Center for Connecticut Education Research Collaboration (CCERC) selected a team of researchers from Yale University and the University of Connecticut to conduct a mixed-methods audit of school districts' emergency response to the COVID-19 pandemic. This audit was requested by the Connecticut General Assembly in Section 389 of Public Act 21-2ss. The study we conducted in response to this request had the four main goals described below.

Project Goals

1. Document the **implementation** of remote learning models by local and regional boards of education during the first two school years impacted by the COVID-19 pandemic (2019-20 and 2020-21)
2. Document how districts supported **learning and student well-being**
3. Document how districts supported **teaching and teacher well-being**
4. Examine links between **learning conditions and student outcomes**, including absenteeism and academic performance

Data Source 1

State-level administrative data

Data Source 2

A survey of district leaders across Connecticut

Data Source 3

A survey of all K-12 Connecticut public school teachers

Data Source 4

Teacher focus groups



In fall 2021, CCERC selected a team of researchers from Yale University and the University of Connecticut to conduct a mixed-methods audit of school districts' emergency response to the COVID-19 pandemic.

Methodology and Analysis

Data Sources. The study used four data sources: 1) state-level administrative data; 2) a survey disseminated in winter 2022 to district leaders in every Connecticut school district and state-approved private special education program (APSEP); 3) a survey disseminated in spring 2022 to all K-12 Connecticut public school teachers, and; 4) focus groups conducted in summer 2022 with selected teachers who responded to the teacher survey.

Analyses. For the administrative data, we used inferential statistics to assess the effects of remote learning on student outcomes. We descriptively summarized survey data and used a coding scheme to summarize focus group data. Finally, we merged elements from the District Inventory with the administrative data to assess the effect of district conditions on student outcomes.

Findings

Caveats. Before summarizing the findings, it is important to note that readers should avoid generalizing findings from the teacher survey and focus groups to the entire state. The teacher survey had a low response rate, and participants may not be representative of the overall teacher population. Similarly, focus group participants were drawn from survey respondents and should not be treated as a representative sample. Additionally, focus groups are intended to provide context rather than generalizable data. Therefore, we caution readers not to draw broad conclusions from these data.

Goal 1. Document the implementation of remote learning models

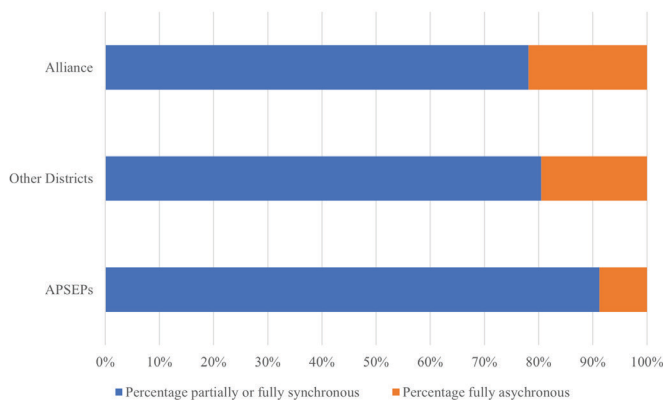
- Most districts reported providing partially or fully synchronous remote instruction during spring 2020, with only slight variation across grade levels. In contrast, most teacher survey and focus group participants reported that they provided fully asynchronous instruction during this period.

“ The study had four main goals: Document the implementation of remote learning models by local and regional boards of education during the first two school years impacted by the COVID-19 pandemic; Document how districts supported learning and student well-being; Document how districts supported teaching and teacher well-being; Examine links between learning conditions and student outcomes, including absenteeism and academic performance.

high-needs students¹ provided less opportunity for in-person learning than districts with a smaller percentage of high-needs students. In addition, uptake of in-person learning opportunities was lower among schools with a large percentage of high-needs students, especially during the transition from fully remote learning to in-person learning in fall 2020 and winter 2021.

- Focus group participants reported that the frequent changes in

Figure F1. Spring 2020 synchronous instruction in elementary schools



- Districts reported that despite all efforts, in May 2020, approximately one-third of students were accessing remote learning less than half the time it was provided. Many teacher survey and focus group participants believed that student disengagement resulted from inadequate adult supervision and other family concerns.
- During the 2020-21 school year, districts with a large percentage of

teaching modality during the 2020-21 school year caused them to cover less material. Teacher survey respondents also reported that they covered a smaller proportion of the curriculum in 2020-21 than in years prior to the pandemic.

- Focus group and teacher survey participants reported that concurrent hybrid instruction was extremely challenging; without adequate training and instructional technology, teachers found it overwhelming to teach students in person and on screen simultaneously.
- When comparing 2020-21 to spring 2020, 96-98% of Alliance districts, non-Alliance districts, and APSEPs reported that teachers were more fluent with remote learning technologies, and 88-94% reported that teachers were better at integrating recommended apps/tools.

Goal 2. Document how districts supported learning and student well-being

- Depending on their grade level and district type, teacher survey respondents reported that in the spring of 2020, 29-55% of their students were progressing with grade level learning and 41-59% of their students were in touch with their teachers daily.
- Again, depending on their grade level and district type, teacher

¹ The Connecticut State Department of Education's high needs classification includes students who have a disability, are classified as English learners, and/or are eligible for free or reduced-price meals.

survey respondents reported that in 2020-21, 42-53% of their fully remote students were progressing with grade-level learning, compared to 51-62% of their hybrid students and between 66% and 77% of their fully in-person students.

- Alliance districts, non-Alliance districts, and APSEPs reported that the percentage of students at all levels with access to a district-provided Chromebook, laptop, or iPad increased dramatically, from 60-72% on March 1, 2020 to 91-95% on November 1, 2020.
- Focus group participants told us that the proportion of students dealing with stress, anxiety, depression, and social isolation was higher during the pandemic than they had ever seen. They reported that student coping skills and maturity levels were below what would be expected for their grade level.

Goal 3. Document how districts supported teaching and teacher well-being

- Focus group and teacher survey participants reported that their well-being suffered from constant changes in class scheduling, pressing student and parent needs, shifting COVID guidelines, fear for their personal health, and absences due to teacher and student quarantines. They shared that these factors created a chaotic and stressful environment, yet they received inadequate support for their well-being from their school or district administrations. Depending on their grade level and district type, 47-58% of teacher survey participants said their district's support for their physical health was somewhat or extremely inadequate, and 63-68% said the same of their district's support for their social-emotional well-being.
- Districts reported making substantive changes to administrator and teacher roles to adapt to remote learning and accommodate student and district needs; in focus groups and surveys, many teachers said they found the added responsibili-

ties overwhelming.

- Districts reported using formal and informal approaches to teacher professional development related to remote learning, including producing their own online teacher resources. Depending on their grade level and district type, between 40% and 60% of teacher survey participants said they had received an adequate amount of professional development across a variety of topics.
- Districts said they will continue to use learning management systems, SEL resources, and videoconferencing systems put in place during COVID to support future learning. Most (63-85%, depending on grade level and district type) teacher survey participants who reported using new instructional technologies during the pandemic indicated that they would like to continue using those resources.

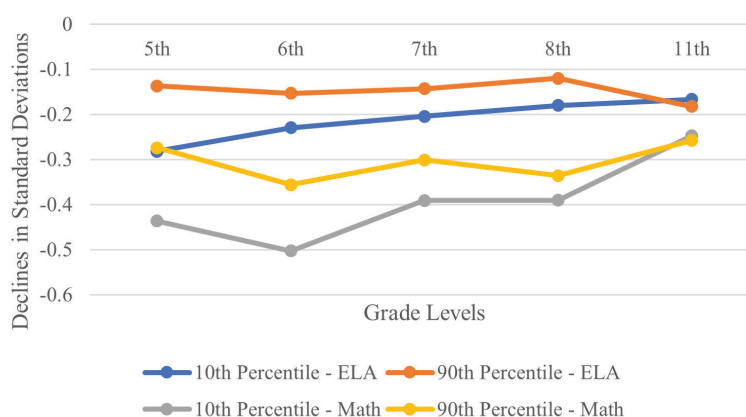
Goal 4. Examine links between learning conditions and student outcomes

- The pandemic was associated with reduced school enrollment in fall 2020, especially among the lower grades.
- In the lower grades, schools with the lowest share of in-person days had the largest declines in ELA and Math test scores. However, we observed no differences on 11th grade SAT scores based on share of

in-person days.

- Schools with lower shares of in-person days had lower attendance rates. This was most pronounced in grades 2-5. Declines in attendance were smaller when students had more opportunity for in-person learning, especially in elementary and middle school.
- Focus group teachers expressed significant concern about the amount of learning loss their students experienced. They reported that student's writing and math skills were significantly below expectations and that high school students were not prepared to take AP courses.
- Focus group participants reported that teachers and students struggled in dual learning models. They felt that they were not able to attend fully to either group of students and worried about the lack of supervision for students participating remotely.
- District-reported social services referrals for students were associated with lower test scores and proficiency. This was likely because the pandemic had differential social-emotional effects on students across schools in ways that depressed their academic performance. These effects were not captured by traditional measures of schools' need (for example, the share of high-needs students).

Pandemic Year Test Score Declines by Share of Days in Person



Recommendations

We recommend developing a statewide plan for potential disruptions to in-person learning that focuses on lessons learned about effective practices during the pandemic and includes input from a diverse group of administrators, educators, and parents. The plan should:

1. Provide resources and guidance to support safe in-person learning

Schools with less access to in-person learning experienced larger declines in student outcomes, and the uptake of in-person learning was lower in schools with larger percentages of high-need students than in schools with smaller percentages of such students. Districts had a great deal of autonomy in whether and how to implement learning models (remote, hybrid, or in-person), which led to different access to learning opportunities. Districts also varied in their ability to purchase safety equipment like desktop shields and high-quality masks for teachers and students. Students, especially those in high-needs schools, would benefit if the state provided more guidance and supports for schools to offer and engage students in in-person learning, including resources to support effective family engagement.

2. Ensure that all districts have adequate instructional technology, professional development, and curriculum resources for remote or hybrid instruction

The pandemic revealed dramatic inequity among districts in resources to support the pivot to remote instruction. The pivot was smoother for districts that had already implemented 1:1 computing, learning management systems, online curriculum resources, and professional development to support teachers in using these resources. Communities also varied in terms of whether families had the resources to support online learning, such as stable internet access. These differences in how quickly and effectively districts could pivot to remote or hybrid instruction and in families' ability to access remote learning had a dramatic impact on students. Developing an emergency plan for timely and efficient delivery of instructional technology, professional development, and curriculum resources for remote or hybrid instruction could shorten the time districts need to respond to emergencies in the future.

3. Carefully consider the challenges of concurrent hybrid instruction

Teachers generally expressed strong negative opinions about concurrent hybrid instruction (simultaneously teaching

students in-person and remotely). The majority said it was overwhelming, especially with little support for providing it effectively. In 2022, the Connecticut General Assembly passed Public Act 22-80², which prohibits concurrent hybrid instruction. If elected officials decide to remove this prohibition in the future, our recommendation is to provide the necessary material and human resources as well as professional development to increase the likelihood of successful implementation.

4. Practically assess student academic progress and social-emotional well-being

As we note, the negative association between social service referrals and students' tests scores and proficiency likely reflects differential community or student vulnerability to the socio-emotional impacts of the pandemic. . Further, traditional measures of school or student need do not seem to capture baseline differences in student vulnerability to these pandemic effects. We recommend developing practical approaches for assessing students academically in remote environments when in-person assessments are not possible. Similarly, we recommend assessing the social-emotional well-being of students during and beyond times of crisis. Doing so would provide valuable information for targeted support.

5. Provide adequate resources to support student academic and social-emotional well-being

Effective student learning during a crisis is likely to require substantial resources like those described in our third recommendation. It also requires guidance and resources for supporting diverse academic needs, including the needs of special education students and English Learner students. Addressing students' social-emotional needs also requires resources, along with school structures designed to respond to those needs as they evolve. Evidence-based approaches to consider supporting in schools include multi-tiered systems of support (MTSS), social-emotional learning (SEL), and Positive Behavior Interventions and Supports (PBIS). These approaches should include formative evaluation or continuous quality improvement to gauge progress and quality of implementation. Learner analytics and artificial intelligence

² Section 25-2a of Connecticut Public Act 22-80 defines dual instruction as “the simultaneous instruction by a teacher to students in-person in the classroom and students engaged in remote learning,” and section 25-2c “prohibits the provision of dual instruction as part of remote learning.”

also show promise for supporting evidence-based decision making and identifying at-risk students.

6. Support families so they can support their students

Families are essential partners in education at any time, but even more so when students are learning from home. This study documented the observation (common among educators) that students whose families could provide adequate support fared better academically, socially, and emotionally during the pandemic. Some caregivers struggled to support their students academically because working outside the home was essential to their families' survival. Other caregivers struggled with remote learning because they didn't have necessary resources or information. We recommend that the state develop resources for families in multiple languages to support communication, technology use, mental health, nutrition assistance, and other needs.

7. Design a plan that mitigates the strain on educators

This study documented that educators experienced high levels of work-related stress during the first two years of the COVID-19 pandemic. Although teachers consistently reported that the first three months of the pandemic were difficult, many said that during that period, they felt their school and district leaders and their communities were compassionate and supportive. However, teachers consistently reported

different challenges in the 2020-21 school year and beyond: many felt that they were asked to carry unreasonable burdens in terms of their personal health and safety, their workload, and their accountability for student achievement. Although many teachers reported that the later period was challenging, expectations of teachers varied across schools and districts. We recommend that the state develop guidelines for teacher job responsibilities during an extended crisis to reduce stress, burnout, and attrition.

8. Acknowledge and reward educators' sacrifices and commitments

Over the course of this study, we heard from many teachers who said they had not been acknowledged or rewarded for their dedication and personal sacrifices during the pandemic. Many said public discourse about teachers had become extremely negative, and that the appreciation they felt early in the pandemic disappeared as the crisis wore on. Teachers expressed frustration that they had made the same sacrifices as other essential workers without receiving hazard pay, sick time for COVID-related absences, or other benefits. Numerous teachers spoke about the failed legislation that sought to award extra years of service toward retirement and the difference such an acknowledgement would make for their morale. We recommend that state and local leaders seek additional ways to acknowledge and reward educators' sacrifices and commitments during the pandemic and potentially during future crises.



📷 (iStock Photo)



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