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Variations in District Strategies for Remote Learning During the COVID-19 Pandemic

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Variations in District Strategies for Remote Learning During the COVID-19 Pandemic

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In spring 2020, the COVID-19 pandemic led to an unprecedented and abrupt stoppage of in-person learning in schools across the country. State education agency leaders in Kansas, Nebraska, North Dakota, and Wyoming needed information on proposed strategies in districts' remote learning plans to ensure continuity and better support remote learning in their states. This study used document analysis to examine proposed strategies related to infrastructure; strategies and supports for instruction; and supports for teachers, students, and parents. Findings are presented separately by district Internet connectivity level, district poverty quartile, and district locale. These findings represent variations in district remote learning plans across the four states included in the study.

The study found that proposed remote learning strategies varied considerably and were often related to district characteristics. For instance, a higher percentage of districts with higher Internet connectivity before the pandemic proposed support for home-based Internet; full student access to devices; technology support; and additional supports for teachers, students, and parents. In addition, a higher percentage of nonrural districts and high-poverty districts proposed supports for students and parents, such as one-on-one meetings between students and teachers and resources for parents on remote learning.

Although district capacity to implement remote learning has likely improved since the start of the pandemic, state education agency leaders can use the findings in this report to consider providing more support to districts with persistent Internet connectivity challenges. Leaders can also use the report to inform additional data collection to examine how remote learning strategies have evolved and to help determine the implications of the shift on student learning.

Why this study?

In spring 2020, the COVID-19 pandemic led to an unprecedented and abrupt stoppage of in-person learning in schools across the country. In response, many state education agencies required districts to create plans for implementing learning at home. These remote learning plans detailed how districts would ensure continuity of learning for students and provide resources to families (Schwartz, 2020). District plans submitted in spring 2020 included a wide array of proposed strategies to support student learning.

For additional information, including a literature review, coding protocol, proposed remote learning strategies by state, and technical methods, access the report appendixes at https://go.usa.gov/xMaPX.

State education agency leaders in Kansas, Nebraska, North Dakota, and Wyoming wanted to understand the variety of remote learning strategies proposed by districts in their states at the beginning of pandemic-related school closures. Specifically, the leaders wanted to know how the proposed strategies varied by district Internet connectivity level, district poverty level, and district locale. (See box 1 for definitions of these terms.)

These district characteristics were likely associated with what resources were available in the shift to remote learning (Herold, 2020). This shift required addressing areas of need such as infrastructure (for example, student access to the Internet and Internet-enabled devices), instruction (for example, new or modified instructional content), student supports (for example, social-emotional learning), and parent supports (for example, resources on helping students learn at home).

The challenges that districts with different characteristics and resources face when shifting to remote learning could have implications for student outcomes. For instance, students generally need Internet access and Internet-enabled devices to get course materials and interact with teachers and classmates. Without adequate access to the Internet and devices, students cannot complete assignments, which may result in unfinished learning (Chandra et al., 2020). A study examining grade 1 through grade 8 interim assessment data in fall 2020 found that unfinished learning in both reading and math was higher than historical averages (Curriculum Associates, 2021). The greatest amount of unfinished learning occurred in the early grades. The study also found that both students performing at grade level and students performing below grade level experienced unfinished learning and that under-resourced schools and schools serving a majority of Black or Latinx students experienced greater amounts of unfinished learning than other schools did.

Supports for teachers, students, and parents also play an important part in implementing remote learning. Teacher supports include professional development on remote learning as well as collaborative planning time with other teachers to share strategies and solve challenges related to remote learning. Student supports such as social-emotional learning and mental health support may be particularly important during remote learning to enhance both academic performance and nonacademic outcomes (Zins et al., 2007). Additionally, because parents play an important role when students learn at home, they need adequate resources and supports to help with remote learning (Chandra et al., 2020). More information on the importance of addressing infrastructure, instruction, student supports, and parent supports related to student outcomes in remote learning is in appendix A.

This Regional Educational Laboratory Central study examined strategies proposed in spring 2020 remote learning plans submitted by districts in Kansas, Nebraska, North Dakota, and Wyoming. State education agency leaders can use the findings to increase the capacity of districts to provide remote learning—for example, by targeting support for districts with limited access to the Internet and Internet-enabled devices. More than 75 percent of schools offered remote learning during the 2020/21 school year (Institute of Education Sciences, n.d.), and districts may continue to offer remote learning as the pandemic comes to an end. For example, the Colorado Department of Education (2021) provides guidance to districts for implementing remote learning during the 2021/22 school year. Further, state education agencies may need to develop plans for future school closures, such as for inclement weather or other emergencies.

In addition, state education agencies could use the study findings and collect new data to better understand the evolution of remote learning plans since spring 2020, which may have implications for interpreting data on unfinished learning. Since then, districts have likely refined their plans, increased their technology capacity, determined new ways to deliver instruction, improved Internet access, and learned more about remote learning (Dorn et al., 2020). State education agencies can use this report, along with new data on how the patterns described in this report have persisted, to better understand the contexts in which unfinished learning may have occurred in their states. They can then use this deeper understanding to target supports to districts in those contexts. More information on the data sources, sample, and methods used in this study is in box 2.

Box 1. Key terms

Asynchronous instruction. Instruction that occurs without real-time interaction between students and teachers. Students make their own schedules for learning, follow online directions, and complete assignments given by teachers. There are no proposed, regularly scheduled class meetings.

Collaborative teacher planning time. Planning time for groups of teachers to support remote instruction, discuss student concerns, and share strategies for remote learning.

Community-based Internet access. Access to the Internet through community resources outside of the home. A district may provide access through Internet buses at specific locations or through community, business, or school Wi-Fi.

District Internet connectivity level. The percentage of school-age individuals within a district's boundaries who have access to residential Internet speeds of at least 25 megabits per second ("broadband Internet"). A district was deemed to have high connectivity if 90 to 100 percent of school-age individuals had broadband Internet, moderate connectivity if 70 to 89 percent of school-age individuals had broadband Internet, low connectivity if 50 to 69 percent of school-age individuals had broadband Internet, or very low connectivity if 0 to 49 percent of school-age individuals had broadband Internet (Center on Rural Innovation, n.d.).

District locale. The location of a district based on the National Center for Education Statistics urban-centric locale framework (Geverdt, 2015), which relies on distance from population centers. A district is designated as *city* if it is located within an urbanized area and a principal city, as *suburban* if it is located outside a principal city and inside an urbanized area, as *town* if it is located inside an urban cluster, or as *rural* if it is located away from an urbanized area and urban cluster.

District poverty quartiles. Four equally sized groups of districts based on district-level poverty rates. Poverty rate is defined as the percentage of school-age individuals within a district's boundaries who were living in households with income below the federally defined poverty level within the previous 12 months (U.S. Census Bureau, 2018). For each state, these rates are ranked and grouped to create quartiles. The first quartile includes the 25 percent of districts with the lowest poverty rates in a state (low). The second quartile includes districts with poverty rates higher than the lowest 25 percent of districts, but lower than the top 50 percent of districts (somewhat low). The third quartile includes districts with poverty rates higher than the lowest 50 percent of districts, but lower than the top 25 percent of districts (somewhat high). The fourth quartile includes the 25 percent of districts with the highest poverty rates (high).

Home-based Internet access. Access to the Internet through the home. To provide remote instruction, a district may propose to use existing access to the Internet in students' homes, provide mobile hotspots for Internet access in homes, or plan with Internet service providers to offer free or low-cost Internet service to families.

Internet-enabled device. Any device that provides access to the Internet. In the context of this study, Internet-enabled devices included laptops and tablets.

One-on-one meetings. Required regular meetings between students and teachers. These meetings may be used for social-emotional or academic support.

Parent communication systems. District strategies for regular communication with parents about the shift to remote learning, technology availability and concerns, and updates on changes to remote learning plans. Such systems may already be in place, or districts can adopt new systems. The systems can involve a variety of means to communicate, including phone calls, website postings, text messaging, and emails.

Parent resources. Resources provided to parents to support, for example, remote instruction and learning, understanding of the COVID-19 pandemic, and student and parent mental health. Parents may receive these resources from teachers or be referred to websites or other sources.

Professional development. Training provided to teachers to support remote learning strategies or technology use.

Social-emotional learning and mental health support. Social-emotional learning and mental health supports provided to students individually (for example, individual interventions), as a class (for example, group lessons), or as a combination of the two.

Student device access. District-ensured access to Internet-enabled devices, such as through lending programs or existing one-to-one initiatives. One-to-one initiatives are district programs to provide all students or a subset of students with Internet-enabled devices for instruction.

Synchronous instruction. Instruction that occurs with real-time interaction between students and teachers. Synchronous instruction may include whole-class, small-group, or individual meetings.

Technology support. District-provided services to help students and parents solve problems with technology or to answer their questions about using technology.

Virtual office hours. Regularly scheduled times or appointments for students or parents to check in virtually with teachers for any needed support.

Box 2. Data sources, sample, and methods

Data sources. To address the research questions, the study team used document analysis of available remote learning plans submitted by districts to four states in the Regional Educational Laboratory Central region (Kansas, Nebraska, North Dakota, and Wyoming) in March and April 2020. The dataset included 724 districts with available remote learning plans. The study team merged district-level data from the following sources: district poverty quartile data retrieved from the American Community Survey 2014–2018 5-Year Estimates (U.S. Census Bureau, 2018), Internet connectivity data retrieved from the Federal Communications Commission Form 477 database (Center on Rural Innovation, n.d.), and district locale classifications from the National Center for Education Statistics (Geverdt, 2015).

From the remote learning plans, the study team extracted information on proposed strategies related to district infrastructure (for example, plans for providing access to the Internet and Internet-enabled devices), instruction (for example, plans for providing instruction online or offline), student supports (for example, plans for providing virtual office hours or social-emotional learning to students), and parent supports (for example, plans for communicating with and providing resources to parents). The study team constructed these categories based on conversations with state education agency partners as well as a review of the state requirements for district remote learning plans. The coding protocol used for the document analysis is in appendix B.

Sample. The study included all public school districts in Kansas, Nebraska, North Dakota, and Wyoming that had submitted a remote learning plan to the state education agency in March or April 2020. Of the 761 districts in these states, 724, or 95 percent, had available remote learning plans. The number of districts in each of the four states, the number of district plans coded, and the number of missing district plans are in appendix C.

Methodology. To address the research questions, the study team developed a common coding protocol (see appendix B) to analyze all available district remote learning plans in Kansas, Nebraska, North Dakota, and Wyoming. Before coding the plans, all team members were trained on the protocol by using a common district remote learning plan for each state and discussing each code to reach consensus. During this process, the study team revised the codes, items, response options, and definitions, resulting in a final version of the protocol. While coding the plans, the study team double-coded 11.5 percent of the plans to ensure interrater agreement. If the percentage of exact agreement on any item was below 80 percent on the double-coded plans, the team discussed the item to reach consensus.

The study team then calculated frequencies of codes for each state, district Internet connectivity level, district poverty quartile, and district locale (city, suburban, town, and rural). Due to the large number of frequencies calculated, this report contains only a subset of results. The results of all analyses are in appendixes C–F. Additional details about methodology are in appendix G.

Research questions

The study examined remote learning plans collected in spring 2020, when schools were first closed to in-person learning due to the COVID-19 pandemic. The study addressed three research questions:

1. How did proposed remote learning strategies vary by district Internet connectivity level?

2. How did proposed remote learning strategies vary by district poverty quartile?

3. How did proposed remote learning strategies vary by district locale?

Findings

This section reports patterns in proposed remote learning strategies in spring 2020 across four states in the Regional Educational Laboratory Central region (Kansas, Nebraska, North Dakota, and Wyoming). Findings are presented separately by district Internet connectivity level, district poverty quartile, and district locale. The findings represent variations in district remote learning plans across the four states included in the study. The distribution of districts by Internet connectivity, poverty level, and locale is in table G2 in appendix G. Complete findings are in appendixes C–F.

Districts with higher Internet connectivity proposed to provide more technology infrastructure and supports for teachers, students, and parents

This section presents findings related to remote learning plans by district Internet connectivity level. (See box 1 for a description of the levels.) Districts with high and moderate ("higher") connectivity likely had more options for responding to the shift to remote learning than districts with low and very low ("lower") connectivity did. Therefore, findings are reported for districts with higher Internet connectivity (at least 70 percent of school-age individuals having access to broadband Internet) compared to districts with lower Internet connectivity (less than 70 percent of school-age individuals having access to broadband Internet). Of the 724 districts with available remote learning plans, 613 had higher Internet connectivity and 111 had lower Internet connectivity. The complete findings for the frequency of each strategy by district Internet connectivity level are in appendix D.

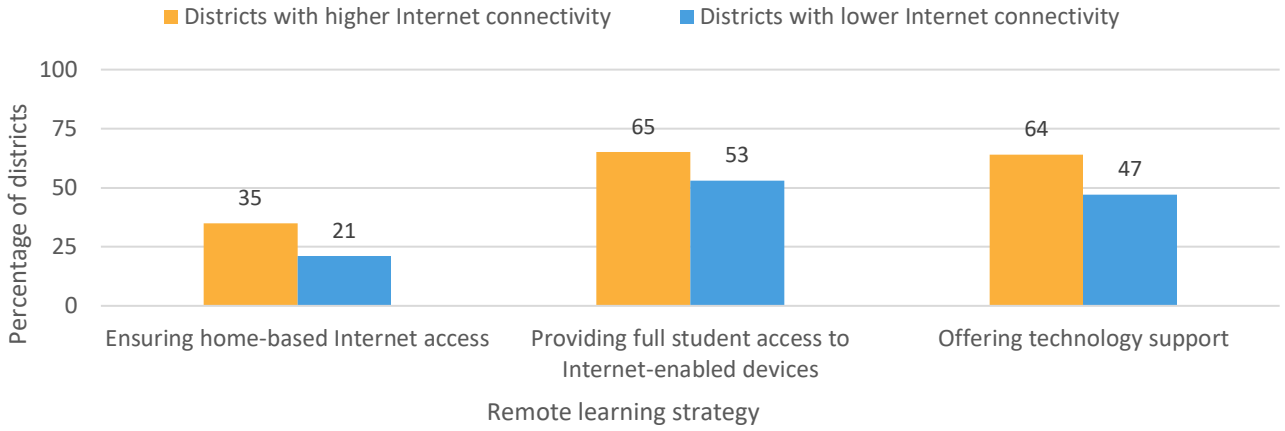
A higher percentage of districts with higher Internet connectivity than districts with lower Internet connectivity proposed strategies to provide technology infrastructure, such as Internet access, Internet-enabled device access, and technology support.

Thirty-five percent of districts with higher Internet connectivity proposed to support Internet access or rely on existing home-based Internet access, compared to 21 percent of districts with lower Internet connectivity (figure 1). Fifty-six percent of districts with lower Internet connectivity did not address Internet access in their plans, compared to 38 percent of districts with higher Internet connectivity.

Sixty-five percent of districts with higher Internet connectivity proposed to provide all students with access to Internet-enabled devices through device lending or programs such as existing one-to-one initiatives. In contrast, 53 percent of districts with lower Internet connectivity proposed full student access to devices.

Sixty-four percent of districts with higher Internet connectivity proposed to offer technology support for students, parents, or both, compared to 47 percent of districts with lower Internet connectivity.

Figure 1. Districts with higher Internet connectivity proposed strategies to provide technology access at a higher rate than did districts with lower Internet connectivity



Source: Authors' analysis of 724 district remote learning plans submitted in spring 2020 to state education agencies in Kansas, Nebraska, North Dakota, and Wyoming and of data retrieved from the Federal Communications Commission Form 477 database (Center on Rural Innovation, n.d.).

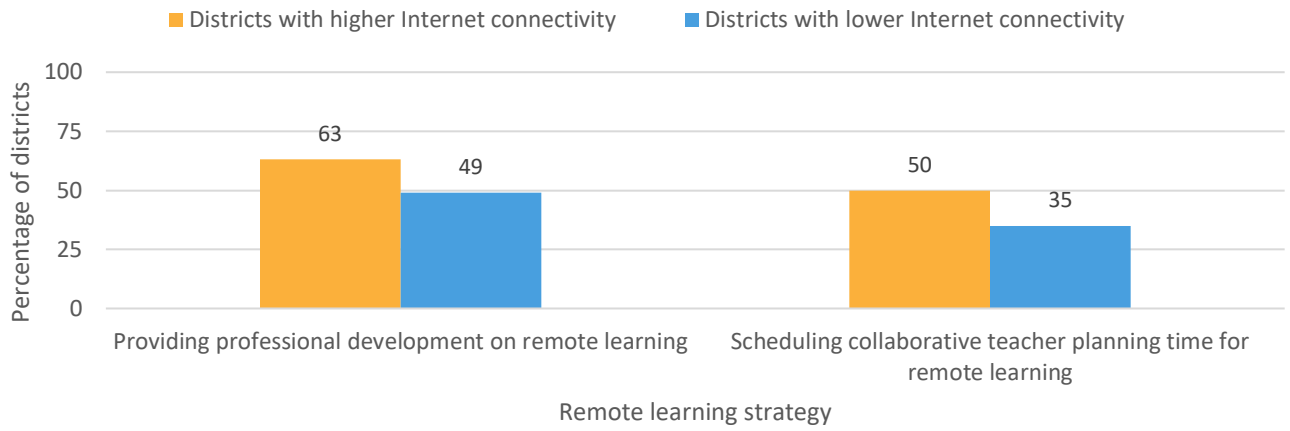
A higher percentage of districts with lower Internet connectivity than districts with higher Internet connectivity proposed to use only asynchronous instruction.

Twenty-seven percent of districts with lower Internet connectivity proposed to use only asynchronous instruction, whereas 16 percent of districts with higher Internet connectivity proposed the same.

A higher percentage of districts with higher Internet connectivity than districts with lower Internet connectivity proposed teacher supports, such as professional development on remote learning strategies and collaborative teacher planning time.

Sixty-three percent of districts with higher Internet connectivity proposed to provide professional development for teachers on remote learning and technology use, compared to 49 percent of districts with lower Internet connectivity (figure 2). Fifty percent of districts with higher Internet connectivity proposed to schedule collaborative teacher planning time for remote learning, compared to 35 percent of districts with lower Internet connectivity.

Figure 2. Districts with higher Internet connectivity proposed strategies to support teachers at a higher rate than did districts with lower Internet connectivity

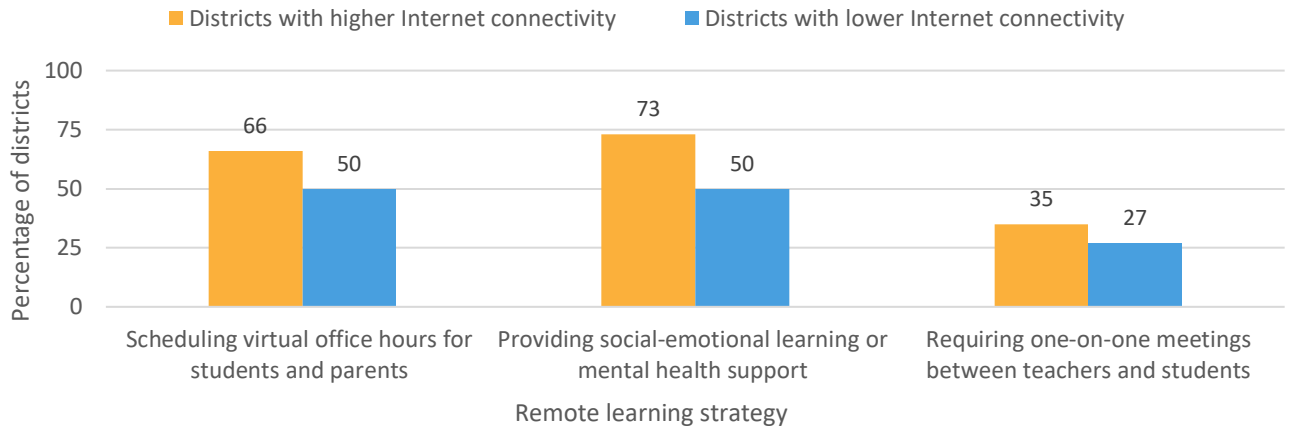


Source: Authors' analysis of 724 district remote learning plans submitted in spring 2020 to state education agencies in Kansas, Nebraska, North Dakota, and Wyoming and of data retrieved from the Federal Communications Commission Form 477 database (Center on Rural Innovation, n.d.).

A higher percentage of districts with higher Internet connectivity than districts with lower Internet connectivity proposed strategies to provide direct student supports.

Sixty-six percent of districts with higher Internet connectivity proposed to schedule virtual office hours for students and parents, compared to 50 percent of districts with lower Internet connectivity (figure 3). Seventy-three percent of districts with higher Internet connectivity, compared to 50 percent of districts with lower Internet connectivity, proposed to provide social-emotional learning or mental health support such as individualized support through counselors, targeted interventions, or group lessons on social-emotional learning or mental health. Also, 35 percent of districts with higher Internet connectivity proposed to require that teachers hold one-on-one meetings with all or some students, compared to 27 percent of districts with lower Internet connectivity.

Figure 3. Districts with higher Internet connectivity proposed strategies to support students at a higher rate than did districts with lower Internet connectivity



Source: Authors' analysis of 724 district remote learning plans submitted in spring 2020 to state education agencies in Kansas, Nebraska, North Dakota, and Wyoming and of data retrieved from the Federal Communications Commission Form 477 database (Center on Rural Innovation, n.d.).

A higher percentage of districts with higher Internet connectivity than districts with lower Internet connectivity proposed parent supports.

Fifty-five percent of districts with higher Internet connectivity, compared to 46 percent of districts with lower Internet connectivity, proposed to provide parents with resources (for example, websites to support instruction, information on supporting remote learning, health information on COVID-19, and daily learning schedules). Additionally, 81 percent of districts with higher Internet connectivity specified plans for communicating changes to remote learning plans and updates on technology to parents through a variety of means, compared to 67 percent of districts with lower Internet connectivity.

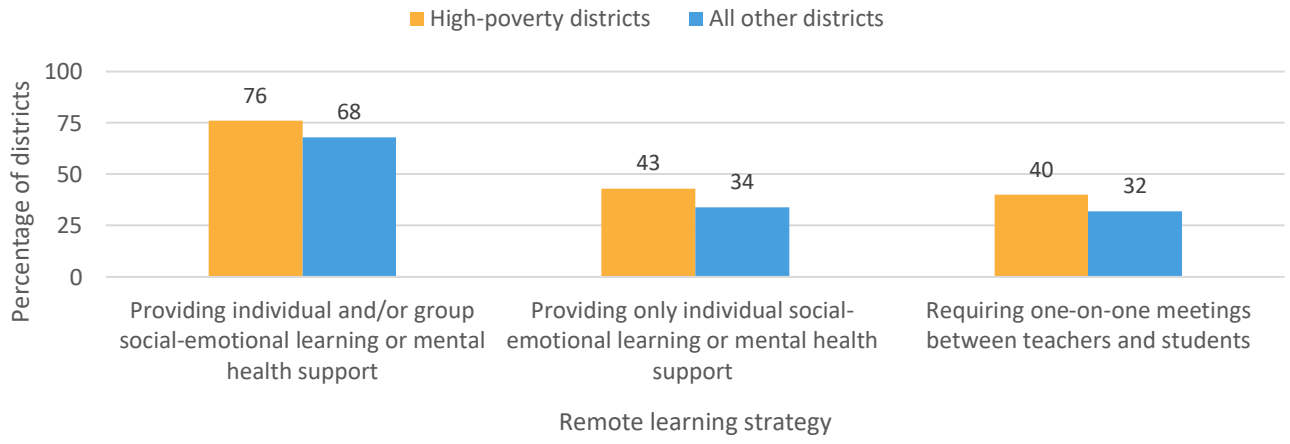
High-poverty districts proposed more supports for students and parents

This section presents findings related to remote learning plans by district poverty quartile. (See box 1 for a description of the quartiles.) Because high-poverty districts (that is, districts in the fourth poverty quartile) may face greater challenges with addressing student needs during difficult situations, such as school closures due to the COVID-19 pandemic, these districts are compared to all other districts (that is, districts with lower levels of poverty, in the first through third poverty quartiles). Of the 724 districts with available remote learning plans, 178 were high-poverty districts and 546 were districts with lower levels of poverty. Complete findings for the frequency of each strategy by district poverty quartile are in appendix E.

A higher percentage of high-poverty districts than all other districts proposed strategies to provide direct student supports.

Seventy-six percent of high-poverty districts, compared to 68 percent of all other districts, proposed some form of social-emotional learning or mental health support for students individually, as a group, or both in their remote learning plans (figure 4). Forty-three percent of high-poverty districts and 34 percent of all other districts focused on individual social-emotional learning or mental health support. Forty percent of high-poverty districts, compared to 32 percent of all other districts, proposed to require that teachers hold one-on-one meetings with all students or with specific grade levels.

Figure 4. High-poverty districts proposed strategies to support students at a higher rate than did all other districts

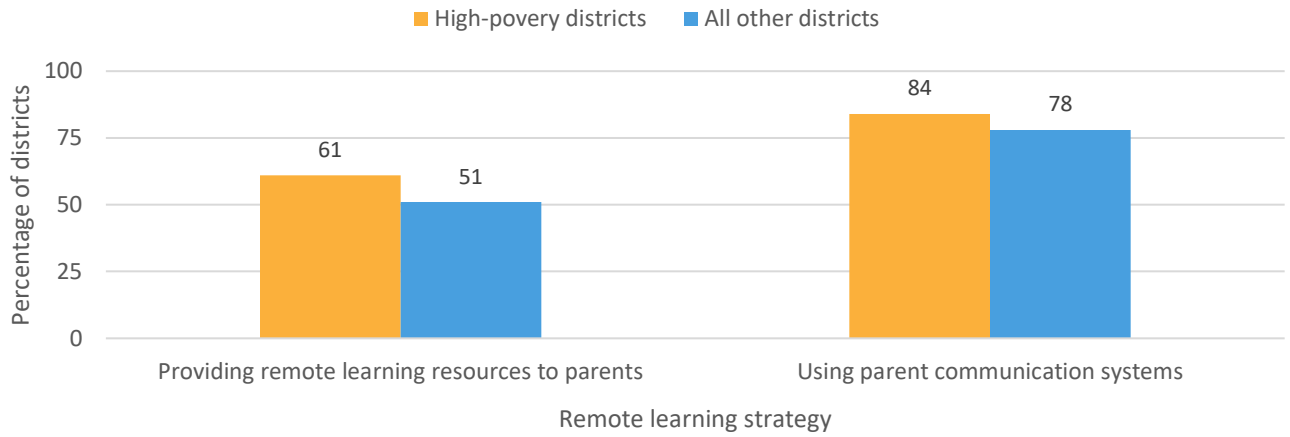


Source: Authors' analysis of 724 district remote learning plans submitted in spring 2020 to state education agencies in Kansas, Nebraska, North Dakota, and Wyoming and of data retrieved from the American Community Survey 2014–2018 5-Year Estimates (U.S. Census Bureau, 2018).

A higher percentage of high-poverty districts than all other districts proposed strategies to provide parent supports.

Sixty-one percent of high-poverty districts proposed to provide remote learning resources to parents, such as daily learning schedules, compared to 51 percent of all other districts (figure 5). Additionally, 84 percent of high-poverty districts proposed to use parent communication systems, such as contacting parents about remote learning via email, phone, or text messaging, compared to 78 percent of all other districts.

Figure 5. High-poverty districts proposed strategies to support parents at a higher rate than did all other districts



Source: Authors' analysis of 724 district remote learning plans submitted in spring 2020 to state education agencies in Kansas, Nebraska, North Dakota, and Wyoming and of data retrieved from the American Community Survey 2014–2018 5-Year Estimates (U.S. Census Bureau, 2018).

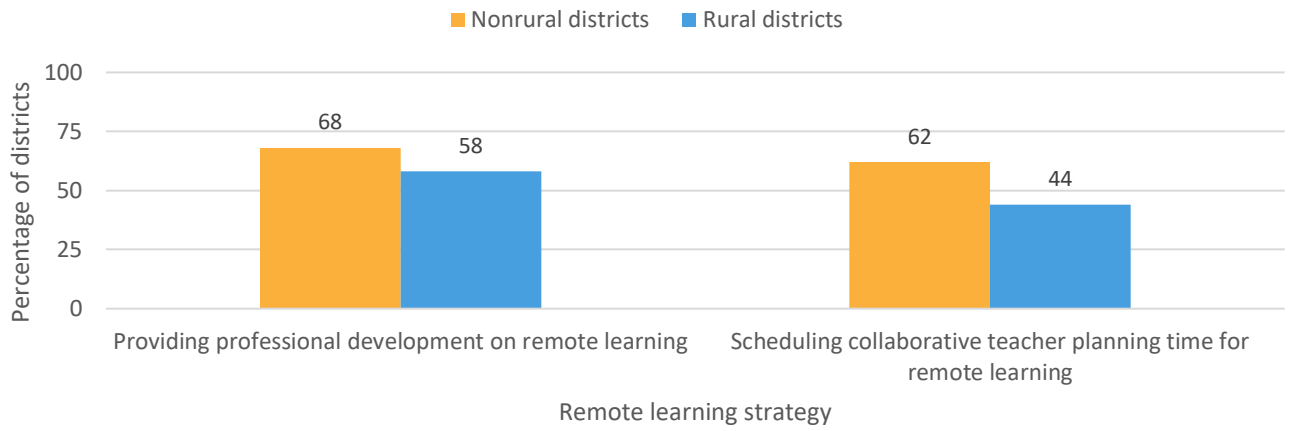
Nonrural districts proposed more supports for teachers, students, and parents

This section presents findings related to remote learning plans by district locale. (See box 1 for a description of the locales.) Nonrural districts are compared to rural districts because rural districts likely have different needs from those of districts within an urbanized area or urban cluster (that is, within city, suburban, and town locales), Of the 724 districts with available remote learning plans, 176 were designated as nonrural (city, suburban, or town) and 548 were designated as rural. Complete findings for the frequency of each strategy by district locale are in appendix F.

A higher percentage of nonrural districts than rural districts proposed teacher supports, such as professional development on remote learning strategies and collaborative teacher planning time.

Sixty-eight percent of nonrural districts proposed to provide professional development for teachers on remote learning, compared to 58 percent of rural districts. Additionally, 62 percent of nonrural districts proposed to schedule collaborative teacher planning time, compared to 44 percent of rural districts.

Figure 6. Nonrural districts proposed to provide teacher supports at a higher rate than did rural districts

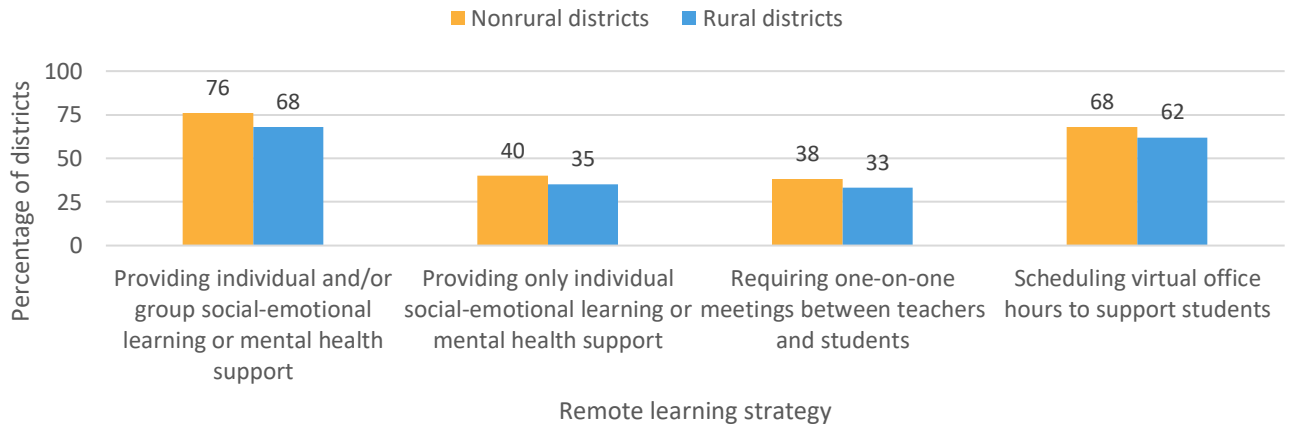


Source: Authors' analysis of 724 district remote learning plans submitted in spring 2020 to state education agencies in Kansas, Nebraska, North Dakota, and Wyoming and of data retrieved from the National Center for Education Statistics urban-centric locale framework (Geverdt, 2015).

A higher percentage of nonrural districts than rural districts proposed strategies to provide direct student supports.

Seventy-six percent of nonrural districts proposed some form of social-emotional learning or mental health support for students individually, as a group, or both in their remote learning plans, compared to 68 percent of rural districts (figure 7). Forty percent of nonrural districts and 35 percent of rural districts focused on individual social-emotional learning or mental health support. Thirty-eight percent of nonrural districts proposed to require that teachers hold one-on-one meetings with all students or with specific grade levels, compared to 33 percent of rural districts. Sixty-eight percent of nonrural districts proposed to schedule virtual office hours to support students, compared to 62 percent of rural districts.

Figure 7. Nonrural districts proposed strategies to provide direct student supports at a higher rate than did rural districts

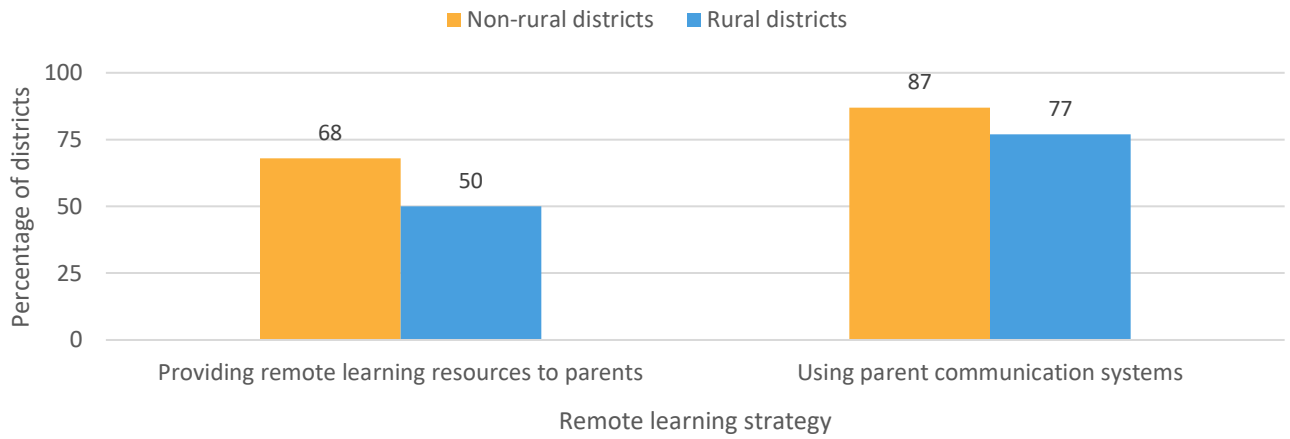


Source: Authors' analysis of 724 district remote learning plans submitted in spring 2020 to state education agencies in Kansas, Nebraska, North Dakota, and Wyoming and of data retrieved from the National Center for Education Statistics urban-centric locale framework (Geverdt, 2015).

A higher percentage of nonrural districts than rural districts proposed providing parent supports.

Sixty-eight percent of nonrural districts proposed providing remote learning resources to parents, compared to 50 percent of rural districts (figure 8). Resources included websites to support instruction, information on supporting remote learning, and daily learning schedules. Eighty-seven percent of nonrural districts proposed to use parent communication systems to provide updates on remote learning changes and technology, compared to 77 percent of nonrural districts.

Figure 8. Nonrural districts proposed strategies to provide parent supports at a higher rate than did rural districts



Source: Authors' analysis of 724 district remote learning plans submitted in spring 2020 to state education agencies in Kansas, Nebraska, North Dakota, and Wyoming and of data retrieved from the National Center for Education Statistics urban-centric locale framework (Geverdt, 2015).

Implications

State education agencies can gain valuable insights from this report, which provides a picture of the remote learning strategies districts proposed in spring 2020 and uses descriptive analysis to identify patterns of proposed strategies across district characteristics. It should be noted, however, that the findings are based on what districts proposed to implement rather than what districts actually implemented.

The findings suggest that some districts could plan more comprehensive learning experiences for teachers, students, and parents. For example, higher percentages of districts with higher Internet connectivity proposed to provide access to the Internet and Internet-enabled devices and supports for teachers and students. In addition, a higher percentage of nonrural districts proposed to provide student supports, suggesting that nonrural districts have more resources than rural districts. Thus, it is likely that the quality of learning experiences was uneven across all districts implementing remote learning (Herold, 2020). Students in districts with lower Internet connectivity and in rural districts likely faced more challenges to remote learning, with fewer resources available to address those challenges.

State education agencies could use federal funding to boost access to the Internet and Internet-enabled devices, focusing on districts with lower Internet connectivity and rural districts. Thirty-six state education agencies have already planned to use funding from the Coronavirus Aid, Relief, and Economic Security Act of 2020 to support broadband Internet access, and 34 planned to use the funding to purchase Internet-enabled devices (Jordan & Siddiqi, 2020). The Federal Communications Commission (FCC) has made additional funding available to expand family, school, and library access to broadband Internet through the Emergency Broadband Benefit program.

The FCC has also expanded E-Rate funding, a program that provides discounts on broadband Internet access for schools and libraries.

Increasing district and student access to the Internet and Internet-enabled devices might also improve the use of remote learning to address student and parent preferences for more flexible and personalized learning, even after the end of the COVID-19 pandemic. Results from the First American School District Panel survey indicate that 30 percent of district leaders anticipate fully remote or hybrid instruction will be offered moving forward (Schwartz et al., 2020). Remote learning may also be an alternative to short-term school closures resulting from inclement weather or other emergencies. To fully realize the opportunities created by remote learning, state education agencies could use federal funding to improve district and student access to the Internet and Internet-enabled devices.

State education agencies could also use the study findings as a baseline to conduct further research to better understand how district remote learning strategies have evolved since the beginning of pandemic-related school closures. This study focused on only remote learning strategies proposed by districts in spring 2020. Since that time, some districts have likely increased their technology capacity, determined new ways to deliver instruction, improved Internet access, and learned more about remote learning (Dorn et al., 2020). This report provides an example and methods that state education agencies could use to conduct follow-up data collection and analysis.

There are other ways that state education agencies could use the information in this report in combination with additional data collection. Agencies could collect additional data to better understand the implications of the shift to remote learning on student learning. For example, the Kansas State Department of Education plans to use the study findings in combination with other data sources and further data collection to help understand how the shift to remote learning in spring 2020 changed instruction, learning, and future student achievement. State education agencies could also use the findings and additional data collection to inform decisions about assessment needs and requirements and, perhaps more importantly, to better understand assessment results from spring 2020, given the conditions at the time.

Although conditions in districts have likely changed since spring 2020, the underlying challenges remain as districts consider ongoing remote learning to allow for flexibility, personalization, and greater access to courses, as well as to respond to future school closures. A complete understanding of those challenges is critical to informing state policies and supports.

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