

Virginia School Division Operations During SY 2020-21: Use of Remote Instruction

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May 2022

Key Findings

In preparing for the 2020-21 school year, Virginia school divisions developed plans to deliver meaningful remote instruction that improved upon the “emergency” instruction they provided when the COVID-19 pandemic suddenly closed schools in March 2020. Divisions had to consider how students would access curriculum if they were not in the school building, how teachers would provide instruction, and whether teachers would be responsible for teaching students both in-person and online. Our analysis of division reopening plans found:

- Most divisions provided online curriculum to their students with fewer divisions providing electronic or physical curriculum.
- Communities in which fewer than 90% of residences connected to broadband internet infrastructure were 2-3 times more likely to provide electronic curriculum. Rural and town divisions were much more likely to provide electronic curriculum compared to suburb and city divisions.

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- About two-thirds of divisions provided both synchronous and asynchronous instruction to their students. Very few provided fully synchronous instruction.
 - About half of Virginia’s school divisions indicated that teachers would be providing instruction to both in-person and online students, but only about one-fifth indicated that this would be occurring concurrently.
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Understanding the Dimensions of Remote Instruction

The pandemic forced divisions to develop new approaches to educating students. Division officials had to consider the needs of their students and their resources at home, as well as the capacity of their workforce and existing infrastructure to provide instruction outside of the school building. In this brief, we focus on the type of remote instruction that a district offered, or planned to offer, when students were not learning in person in the schools. This brief does not address how divisions chose to educate students who participated in the division’s virtual online program.

Characterizing Division Operations during SY 2020-21

As part of a research project in partnership with the Virginia Department of Education (VDOE), we collected and coded over a thousand documents pertaining to the SY 2020-21 operations of Virginia's 132 school divisions. These documents included the divisions' reopening plans and revisions to those plans that they submitted to VDOE. We also scoured each division's website (including archived sites via the Wayback Machine), Twitter feeds, and Facebook pages for additional information on division operations and how they changed over the course of the year. A team of 14 trained coders reviewed all documents for information on 32 dimensions. With all documents reviewed and coded, we collapsed the codes across the documents within each division to arrive at a final set for each division that characterize how the division operated over the course of the full school year.

Our characterization of division operations during SY 2020-21, therefore, reflect what the divisions said they would do or were currently doing. If a division never referenced a given dimension of operations in their documents, websites, or social media, we coded the division as "no information". It is possible the division did make a decision regarding this dimension of its operations but chose not to communicate its decision with students and families through these readily-accessible means.

In addition to describing the variation in how divisions operated on a specific dimension, we also examine how operations varied with the divisions' concentration of minoritized students (quartiles), concentration of economically disadvantaged students (quartiles), locale (city, suburb, town, or rural), and the percent of

residences that have access to (but are not necessarily connected to) broadband internet speeds of at least 100 mbps (0-40%, 41-60%, 61-80%, 81-90%, or 91-100%).

Remote Curriculum

Divisions offered remote curriculum in three formats: online, electronic, or physical (or some combination thereof). The analyses look at the provision of each type of remote curriculum by a district, not the possible combinations of curricula, and are therefore not mutually exclusive.

- *Online* – Curriculum is accessed through a device connected to the internet while at home and thus requires both a device and connectivity at home
- *Electronic* – Curriculum may be downloaded (either at school or onto a flash drive) and can be accessed on a computer/tablet at home without an internet connection
- *Physical* – Curriculum does not require a device or internet connectivity at home
- *No Information* – The division's documents provided no clear indication of how remote curriculum would be provided. This does not imply that they provided no remote curriculum.

Remote Instructional Modality

Modality references the way in which remote instruction was delivered to students. Grade level data were compiled to develop an elementary (K-5), middle (6-8), and high school (9-12) measurement for each division.

- *Asynchronous* – Division only provided asynchronous instruction
- *Synchronous* – Division only provided synchronous instruction

- *Both* – Division provided synchronous and asynchronous instruction
- *Mixed* – Division provided different modalities for grades within the same grade band
- *None* – Division did not provide remote instruction
- *No Information* – The division's documents provided no clear indication of how remote instruction would be provided. This does not imply that they provided no remote instruction.

Dual Modality Teaching

Dual modality teaching refers to a teacher being responsible for providing instruction to students learning in person and remotely. If a division's plan indicated that teachers would be responsible for instructing both groups of students, we looked for indications about whether that instruction would be provided concurrently or at separate times within a day.

Remote Instruction Trends in Virginia

Divisions approached these dimensions differently as they developed instructional plans for the 2020 – 2021 school year. The following sections explore the variation across the state as well as any overlap with the following division characteristics: broadband internet access rates, concentrations of economically disadvantaged students, concentrations of minoritized students, and locale.

Remote Curriculum

Almost all divisions provided an online curriculum (92%), and less than half of the divisions provided electronic or physical curricula (44% and 48%, respectively), as shown in **Figure 1**. Thirty-five divisions (27%) provided curriculum in all three formats, and 37% used two of the three formats. Nine divisions (7%) provided no clear indication in their documents for how they would provide remote curriculum.

Given the near universal availability of online curriculum, we examine how the provision of electronic curriculum varied across divisions. Divisions with concentrations of minoritized students below the median (i.e., first and second quartiles) were 67% more likely to provide electronic curriculum compared to the divisions concentrations above the median (i.e., third and fourth quartiles; 55 and 55% versus 30 and 36%). The opposite relationship existed with respect to divisions' concentrations of economically disadvantaged students. Divisions

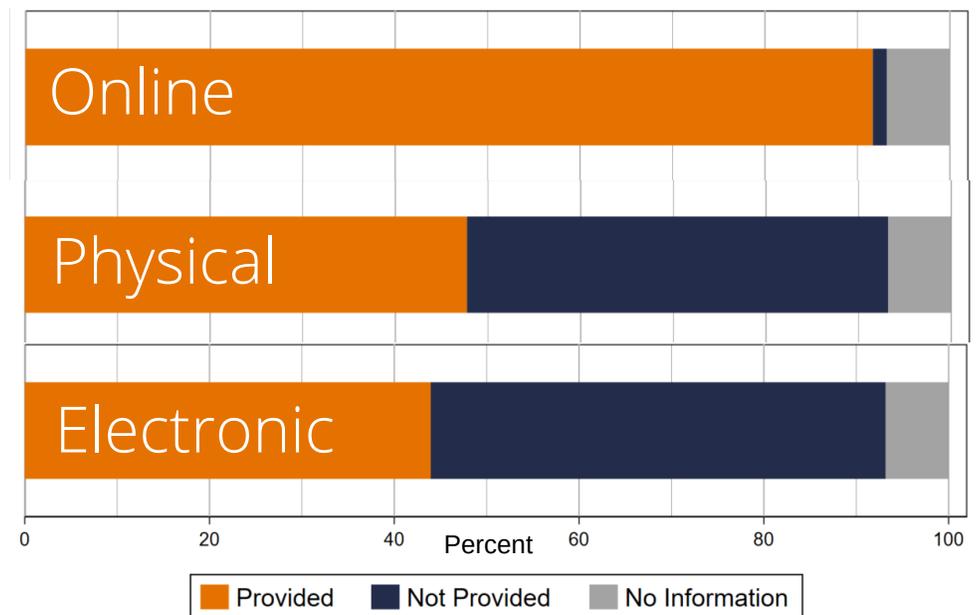


Figure 1. Share of Divisions Providing Remote Curriculum in Online, Physical, or Electronic Formats

with lower concentrations (i.e., first and second quartiles) were less likely to provide electronic curriculum than those with concentrations in the third and fourth quartiles (33 and 24% versus 76 and 42%).

The only clear pattern in whether divisions provided physical curriculum was with respect to the concentration of economically disadvantaged students. Divisions with higher concentrations (third and fourth quartiles) were more likely to make physical curriculum available than divisions with lower concentrations (61 and 55% versus 33 and 42%).

Rural and town divisions (55 and 60%) were 3-4 times more likely to provide electronic curricula compared to suburban divisions (22%) and nearly 9-10 times more likely than city divisions (7%), as shown in **Figure 2**. Communities in which fewer than 90% of residences were capable of accessing broadband internet were 2-3 times more likely to provide electronic

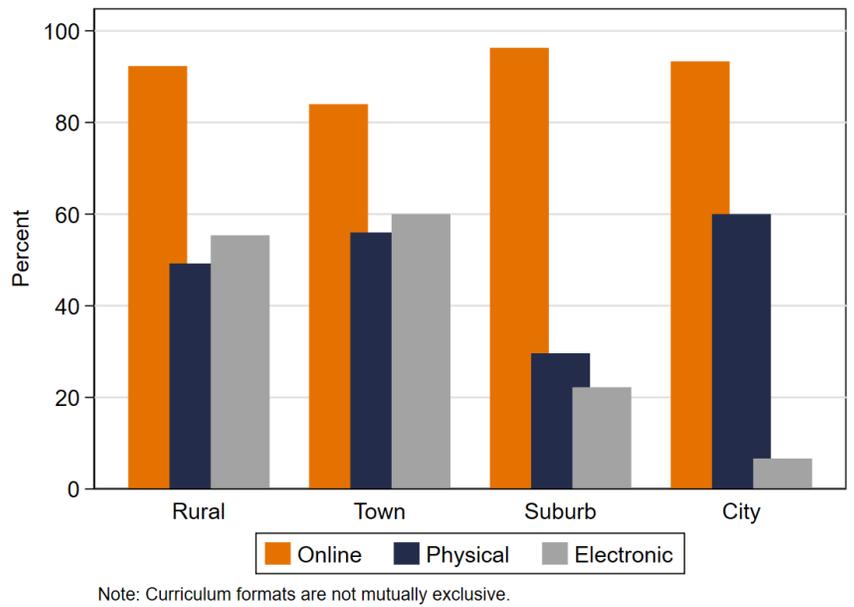


Figure 2. Remote Curriculum Format by Locality

curriculum (25 versus 41-74%).

Remote Instructional Modality

There was no meaningful variation across grade bands in the mode through which divisions delivered remote instruction, as shown in **Figure 3**. Divisions were more likely to provide asynchronous instruction (83-85%) than synchronous instruction (68-71%). Two-thirds of all divisions indicated they would provide both asynchronous and synchronous instruction. Twenty divisions (15%) provided fully asynchronous instruction to elementary students whereas 22 divisions (17%) did the same for middle and high school students. Very few divisions provided fully synchronous instruction to elementary, middle, and high school students (1, 4, and 3 divisions, respectively). The mode of remote instruction varied across the elementary grades in four

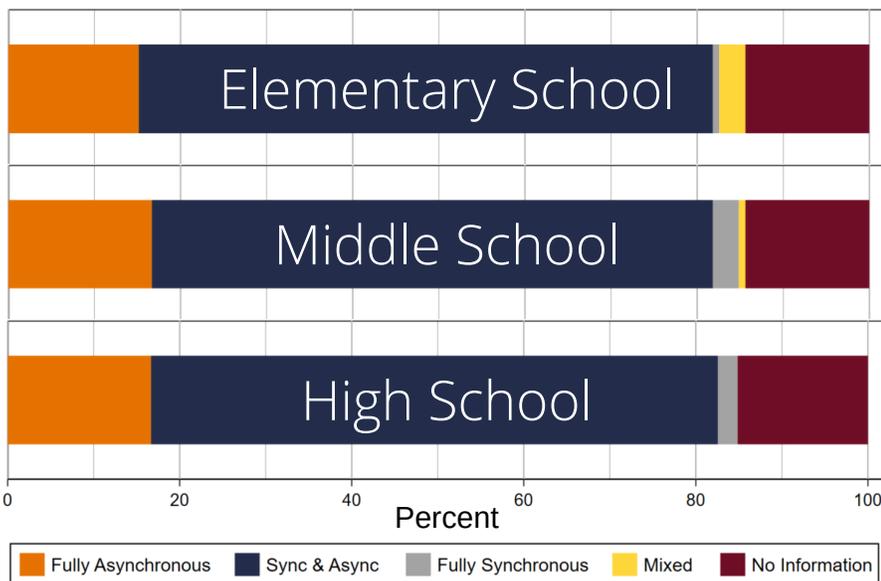


Figure 3. Instructional Modality by Grade Band

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divisions (3%) and across the middle school grades in one division. Nineteen divisions (14%) provided no clear indication in their documents for how they would provide remote instruction to elementary and middle students; 20 (15%) provided no clear indication for high school students.

Remote instruction for pre-kindergarten students often varied from a divisions' K-12 plan. Eighty divisions (61%) provided synchronous and asynchronous instruction to their pre-K students, eighteen (14%) provided fully asynchronous instruction, and one provided fully synchronous instruction. However, two divisions (2%) explicitly stated they would not be providing remote instruction to their pre-K students, and thirty-one (24%) provided no information on how they would provide instruction.

Divisions where more than 40% of residences are

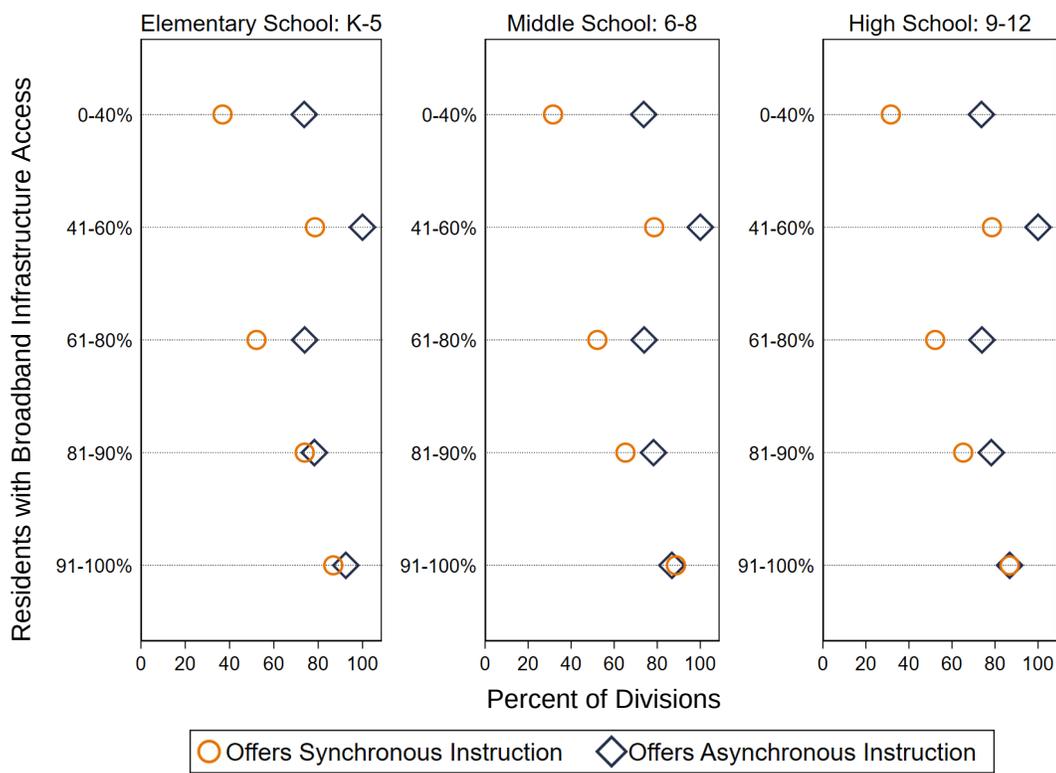


Figure 4. Remote Instructional Modality by Broadband Infrastructure Access

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able to connect to broadband internet access were 2.5 times more likely to provide some type of synchronous instruction to their students compared to divisions with fewer than 40% of their residences able to connect to broadband internet (76 versus 32-37%). These divisions were also much more likely to provide only asynchronous instruction. **Figure 4** shows the gap between asynchronous and synchronous instruction decreasing as access to internet infrastructure increases.

At the elementary level, thirty-seven percent of divisions with fewer than 40% of their residences able to connect to broadband internet provided fully asynchronous instruction, which was nearly double the rates of fully asynchronous instruction in divisions with 41-80% access, 4 times more likely than divisions with 81-90% access (9%), and 6 times more likely than divisions with over 91% broadband access (6%).

At the secondary level, divisions with the lowest rates of internet access were 10 times more likely to provide fully asynchronous instruction compared to divisions with the highest rates of broadband access (42 versus 4%).

By locality, fewer than two-thirds of rural and town divisions offered some type of synchronous instruction (ranging from 56 to 63% by grade level band).

Rates of synchronous instruction increased by 30 percentage points in suburban divisions (89%) and city divisions (87%).

The divisions with the lowest concentration of economically disadvantaged students were the least likely to provide fully asynchronous instruction (3-6%). For all other quartiles, rates of fully asynchronous instruction increased by about 10-15 percentage points for elementary students, and 15-20 percentage points for middle and high school students. The half of divisions with higher concentrations of minoritized students were about 20 percentage points more likely to provide synchronous instruction compared to the half of divisions with lower concentrations of minoritized students (76 to 82 versus 55 to 64%).

Unsurprisingly, all divisions that offered fully synchronous instruction also offered online curriculum. Divisions that offered only asynchronous instruction were slightly more likely to provide physical curriculum than those that offered both or only synchronous instruction (55 versus 49%).

Dual Modality Teaching

Sixty-nine divisions (52%) indicated that teachers would be expected to teach both in person and virtual students. Among these, 35% clearly stated that teachers would be providing instruction in each modality simultaneously and 12% said that teachers would instruct the in-person and virtual students at separate times. The remaining divisions provided no clear indication of whether teachers would teach the two groups of students simultaneously.

Explicit simultaneous dual modality teaching was more likely in city and suburban divisions (33%)

compared to town and rural divisions (8%). Concurrent instruction rates were highest in divisions with the highest rates of broadband internet access (26%) and divisions with lower versus higher concentrations of economically disadvantaged students (4 to 17%). Divisions with higher concentrations of minoritized students were also more likely than divisions with lower concentrations to provide concurrent instruction (33 versus 9 to 18%).

Closing

Divisions had to develop plans to meet the needs of their students. And when analyzing reopening plans by division characteristics, certain patterns emerge. Rural and town divisions were often distinctly different than city and suburb divisions, though each pair was similar. The ability of residences to access broadband internet played a large part in how students were able to access curriculum and instruction as well. The decisions divisions made regarding remote instruction very likely impacted students' academic performance and social and emotional learning as well as teacher job satisfaction and retention. We will examine some of these associations in future analyses.

Acknowledgements

The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through R305S210009 to the Virginia Department of Education. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.