

Inequality in Household Adaptation to Schooling Shocks: Covid-Induced Online Learning Engagement in Real Time

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Types of Google Searches for Online Learning Resources

- School-centered: Educational platforms (i.e. Google Classroom) that schools use to connect with students; parents typically can not use these without the school's involvement.
- Parent-centered: Generic learning resources (i.e. “math worksheets”) that parents (or guardians or students themselves) search for on their own, without the school's involvement.

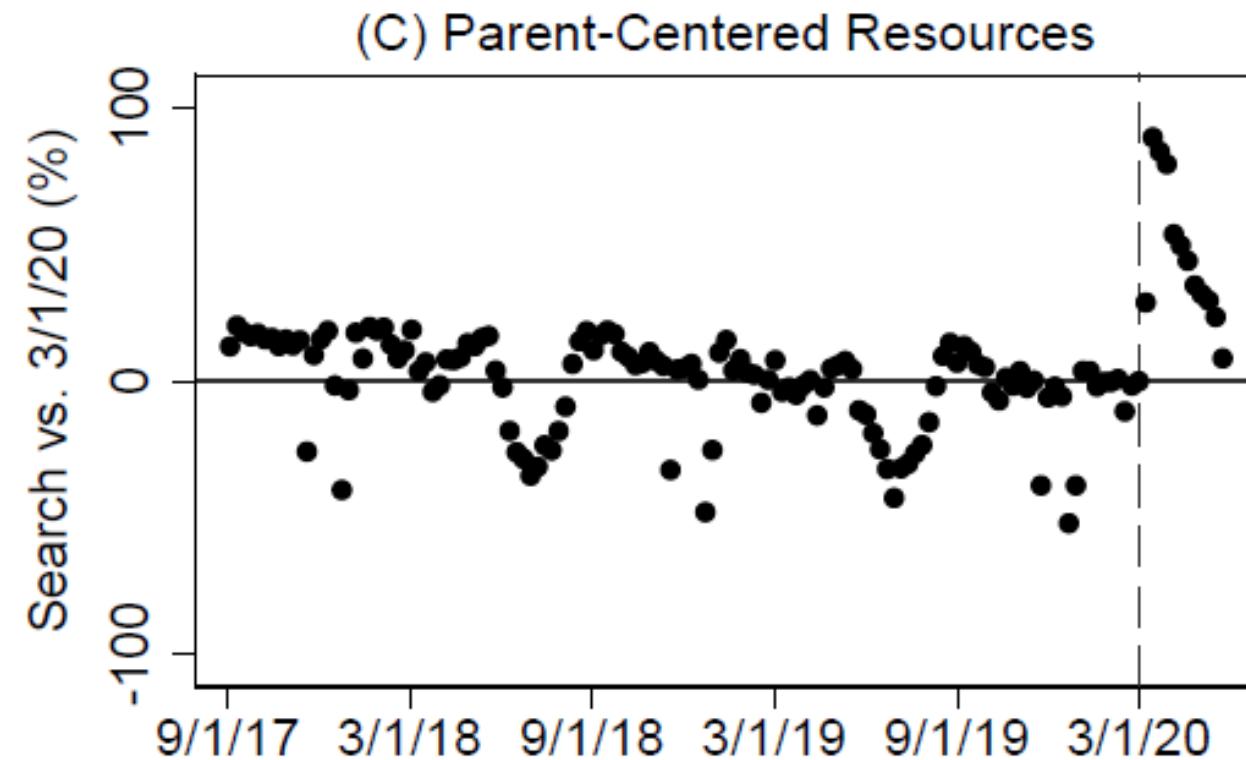
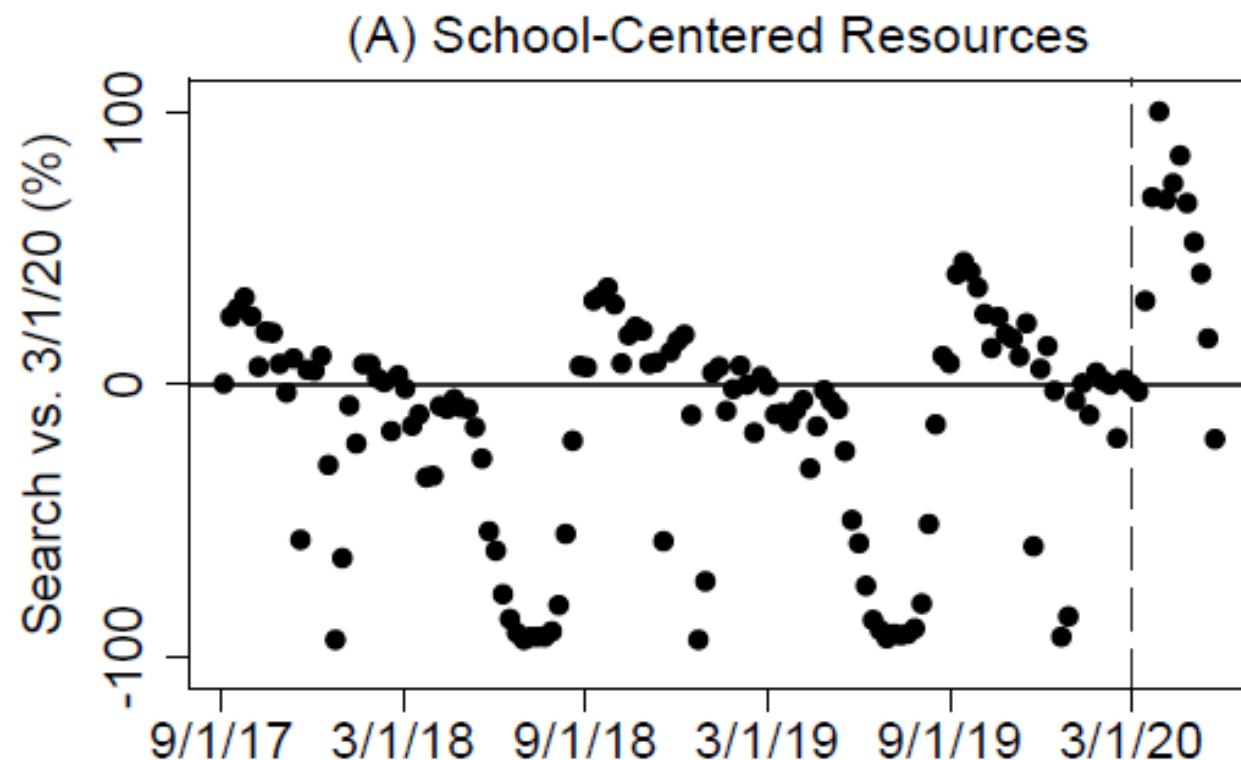
Table 1: Search Intensity of Top 10 Individual Keywords

School-Centered Resources			Parent-Centered Resources		
Keyword	Pre-Covid	Post-Covid	Keyword	Pre-Covid	Post-Covid
Google Classroom	1.00	1.95	Online school	0.04	0.06
Khan Academy	0.13	0.20	Online classes	0.03	0.05
Kahoot	0.33	0.19	Home school	0.03	0.03
Seesaw	0.02	0.15	Online class	0.00	0.02
Schoology	0.07	0.12	Math game	0.03	0.02
Class Dojo	0.01	0.06	Distance learning	0.00	0.02
Flipgrid	0.00	0.05	Math worksheets	0.00	0.02
D2L	0.05	0.05	Online math	0.00	0.01
Nearpod	0.02	0.02	Math problem	0.00	0.01
Edmodo	0.02	0.02	Online reading	0.00	0.00

Notes: Mean nationwide search intensity is shown for March-May 2019 (pre-Covid) and March-May 2020 (post-Covid). Search intensity of each term is measured relative to the pre-Covid search intensity for “Google Classroom”. Searches are not case sensitive.

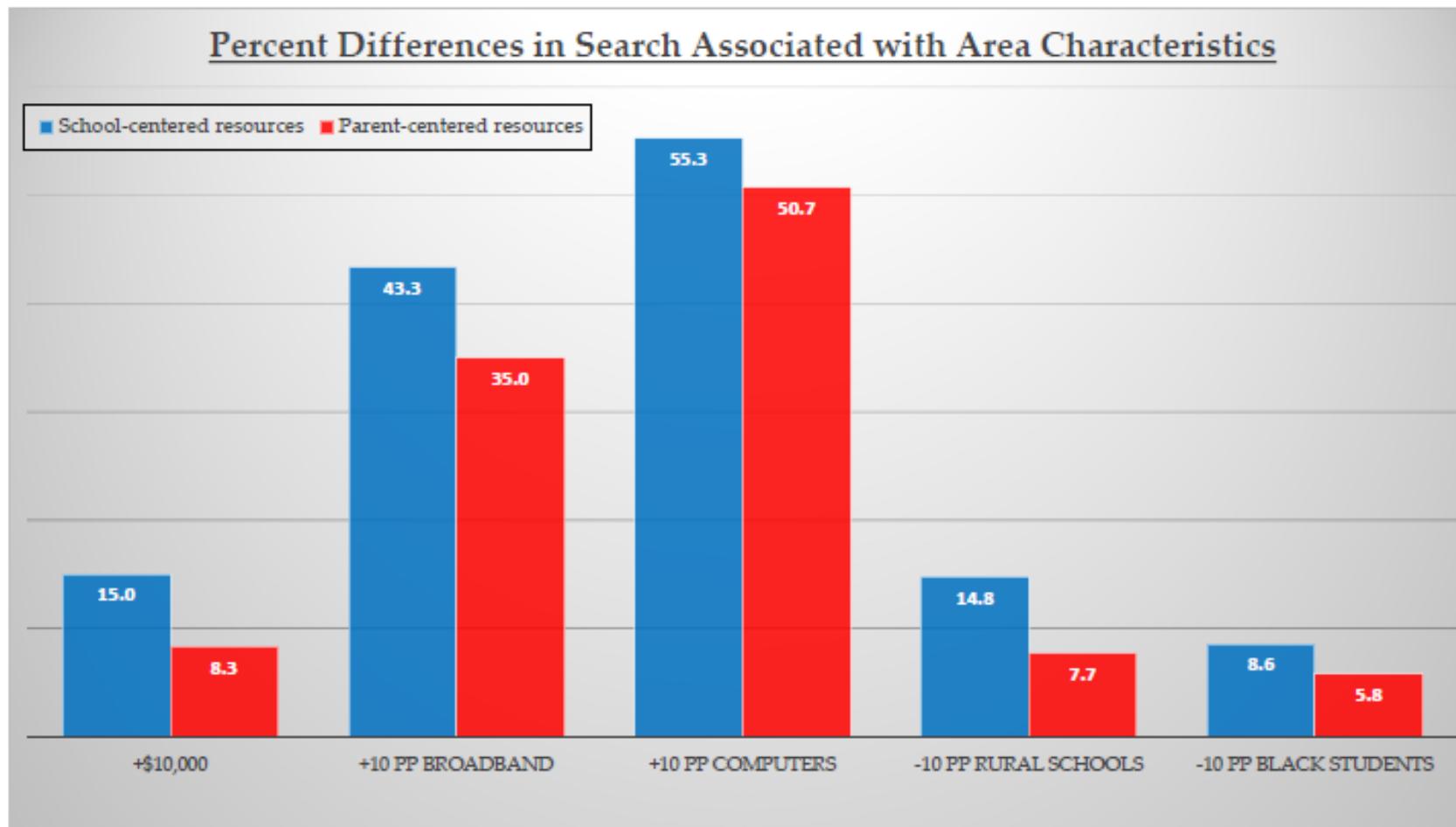
Rhythms of Search for Online Learning Resources

- Search intensity for online learning resources typically waxes and wanes with the school calendar.
- That annual rhythm was broken for the first time in spring 2020, with search intensity for online learning resources spiking dramatically.



Inequality in search for online learning resources

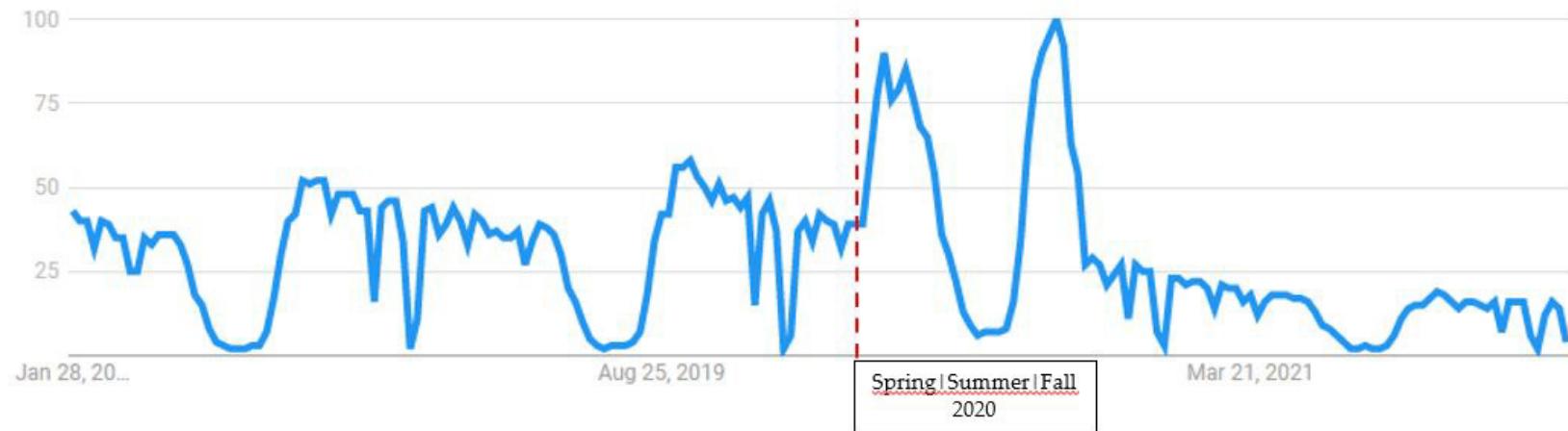
- The observed jump in search for online learning resources is larger in areas of the country that are higher income, have more broadband penetration and home computer ownership, are less rural, and have fewer Black students.



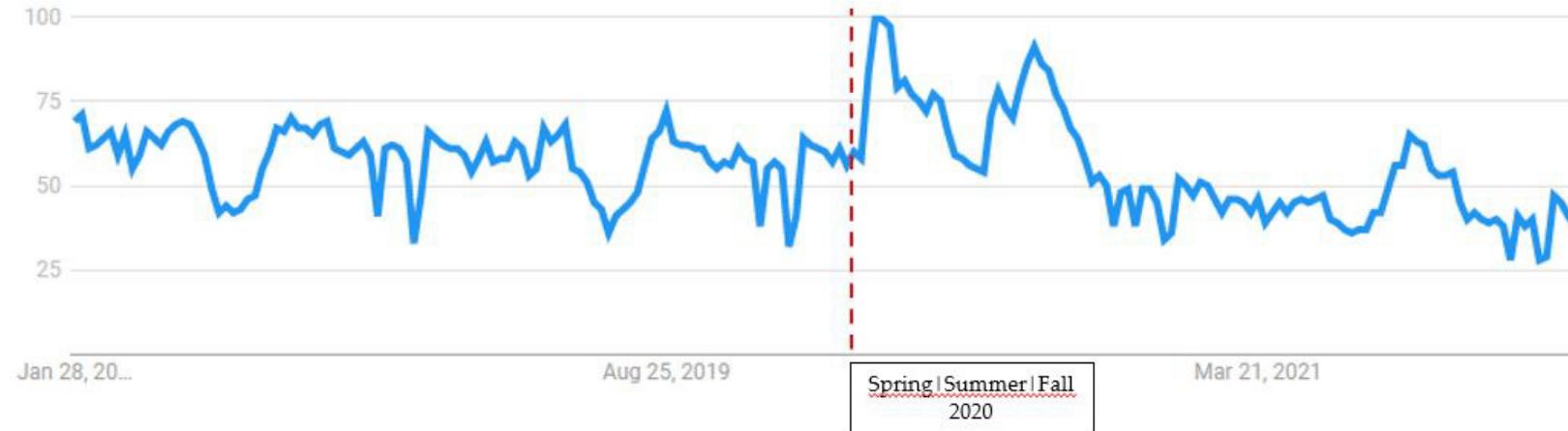
Winter 2022 update

- We saw another nationwide spike in search for online learning resources in fall 2020, but very low levels since then (perhaps many people have already found the resources they need).

(A) School-centered resources



(B) Parent-centered resources



Policy/practice implications

- When normal schooling is disrupted, parents/students will look for resources either in partnership with schools or as a replacement to them.
- Socioeconomic inequalities in use of such resources may be driven in part by differences in broadband access.
- But it may also be driven by differences in:
 - School capacity to deploy such online resources;
 - Parental capacity to take advantage of such resources even if access is not an issue.
- Getting this right is important both for helping schools/families weather future shocks and to rebuilding some of the support public schools have lost (i.e. through falling enrollments).