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ACHIEVEMENT GAPS AND THE LOST COVID-19 GENERATION

Systemic academic gaps and an economic downturn may equal a bleak future for many students – but it does not have to be this way.

AUTHOR
Michael D. Toth
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About The Author: Michael Toth

Michael D. Toth is founder and CEO of Learning Sciences International (LSI) and leads LSI's Applied Research Center. Michael is author of the multi-award-winning book The Power of Student Teams: Achieving Social, Emotional, and Cognitive Learning in Every Classroom Through Academic Teaming with Dr. David Sousa; author of award-winning Who Moved My Standards; and co-author with Dr. Robert J. Marzano of The Essentials of a Standards-Driven Classroom, School Leadership for Results, and Teacher Evaluation that Makes a Difference.

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How large is the disruption?

Research is emerging showing how dramatic the learning losses for children are and will likely continue to grow from continuing COVID-19 school closures – unless we do something to change it. School leaders can actively close these gaps now before they widen into chasms by supporting educators to develop eight virtual teaching skills that can make all the difference to close the learning gaps among students and accelerate online learning for all students.

Educators are on the front lines of what a recent U.N. report calls "the largest disruption to education in history." Nearly 1.6 billion learners in more than 190 countries and all continents are affected (United Nations, 2020). After months of school closures, the potential for a "lost COVID-19 generation" of students is emerging.

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Disadvantaged learners severely impacted – and they're not the only ones

Mother helping son studying with distance learning at home

Achievement gaps due to the extended school closures in spring 2020 and continuing into the fall will span all grades K-12 and affect all students. From the most economically advantaged and academically talented to the most disadvantaged students who already had considerable barriers to their learning, every student will likely experience regression in academic learning and social-emotional development.

According to a study by the University of Southampton in the UK, it could take a **full year** for students from disadvantaged families to catch up. Even students from advantaged families will need an estimated **six months** to recover lost learning (Pensiero et al., 2020). This was only taking into account the school closures for last spring. If virtual instruction continues unchanged and teachers don't receive the support they need to develop new virtual teaching skills and accelerate student learning, the losses could become even more severe.

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The gaps could get even worse

McKinsey & Company report similarly stark and unequal impacts, predicting that a January 2021 mass re-opening of in-person school would mean **10.3 months** of lost learning for black students, **12.4 months** lost for economically disadvantaged students, and an average of **6.8 months** lost for all students (Dorn et al., 2020).

We are not facing just an achievement gap – an achievement chasm is opening up. And as the COVID-19 generation grows up, this chasm in academics will translate to adult skill gaps and lost wages unless educators mitigate this by accelerating learning and closing gaps now in virtual instruction.

What long-term economic impacts do students face?

The Royal Society's Data Evaluation and Learning for Viral Epidemics (DELVE) in the UK estimates that about a quarter of their workforce will have lower skills due to COVID-19 school closures. The study predicted that skill loss could translate to a reduction in students' earning potential by about 3% a year if no action is taken (DELVE Initiative, 2020). And this is as of July 2020 – depending on how school re-openings proceed, the impact could be worse.

Lost learning could mean a lifetime of lost wages

McKinsey & Company's statistical model for the U.S. also warns of the severe potential impacts of skill loss on students' economic future. The numbers skewed more severe for students of color and those from low socioeconomic backgrounds.

Average earnings could be reduced for black students by $2,186 per year (3.3%), for students from low socioeconomic backgrounds by **$1,642 per year** (4%), and for white students by **$1,348 per year** (1.6%). Over a 40-year working life, students could lose $61,000 to $82,000 in lifetime earnings just from learning losses caused by COVID-19 school closures (Dorn

et al., 2020). If schools remain closed past January 2021, the losses will continue to climb.

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The threat of a divergent economic crisis and recovery

Early evidence of disproportionate economic impacts from COVID-19 is already emerging. The Stanford Institute for Economic Policy Research reported that **41%** of black-owned businesses permanently closed between February and mid-April of this year. The number of white-owned businesses that closed in the same time period was **17%** (Fairlie, 2020).

Some economists predict a "K-shaped" economic recovery on the horizon. Certain individuals and businesses will rebound and grow rapidly – following the upper part of the "K" – while others will follow the lower part of the "K," plummeting into sharp decline (Thorbecke, 2020). This divergent recovery will perpetuate economic inequities and further aggravate an already existing class divide.

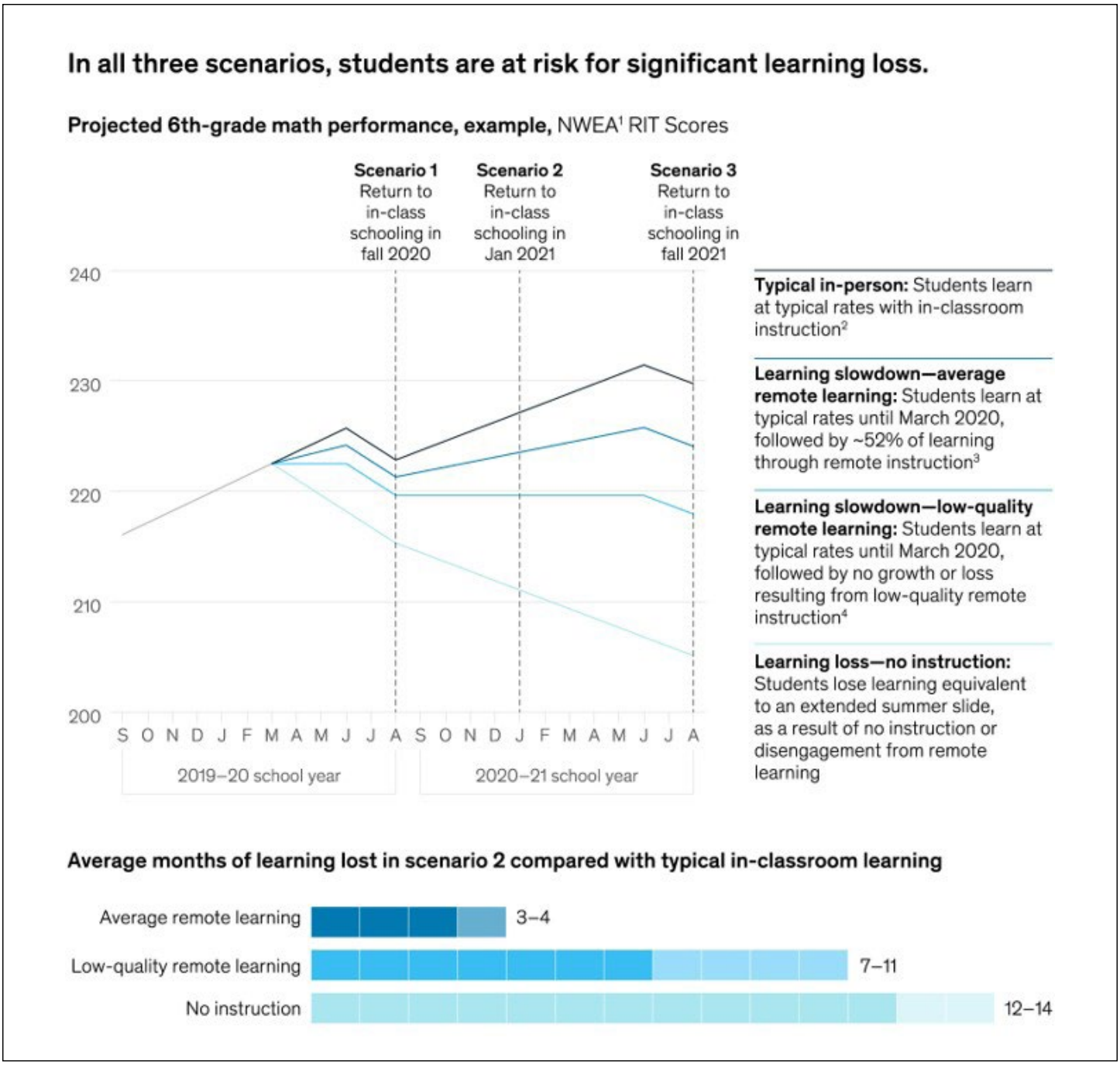
How do we solve the root cause of academic gaps?

The most important school-based factor in student achievement is teacher quality (McCaffrey, et al., 2003). High-performing teachers deliver strong tier 1 core instruction. Strong core instruction is effective at getting all students to demonstrate evidences of achieving the lesson's learning target by the end of the lesson – and doing this effectively for every lesson.

Strong core instruction matters. Researchers found that if a student had one poor-performing teacher, the student could experience negative effects on achievement that persisted through three years of high-performing teachers (Mendro, 1998).

High-quality virtual core instruction was likely nonexistent for some groups of students

Existing inequities in the quality of core instruction have carried over and worsened in the COVID-19 virtual learning environment. McKinsey & Company estimated the quality of remote instruction for K-12 students during the COVID-19 school closures and reported that **46%** of black students and **60%** of socioeconomically disadvantaged students likely received low-quality instruction, respectively, and for both groups, **40%** likely received no instruction at all.



Further, McKinsey & Company estimated that only **14%** of black students and **0%** of socioeconomically disadvantaged students likely received high-quality remote instruction during the pandemic. The estimated overall average of all K-12 students who received high-quality remote instruction was a mere **32%** (Dorn et al., 2020).

In the graph above, McKinsey & Company projected how the quality of remote learning and the in-class reopening dates will affect the level of learning losses based on NWEA RIT scores (Dorn et al., 2020). Note the dips that represent the typical summer regressions, which are even more severe in remote learning environments. Even average-quality

remote learning causes a learning slowdown throughout the year, whether schools open in-person this fall, next spring, or next fall.

The impact of low-quality instruction is devastating. Note that low-quality instruction causes students to experience no growth from August to May – therefore losing another entire year of learning – and then they would hit another summer regression. If students receive no instruction (or disengage from remote instruction) their learning would fall into a sharp decline from which they may never be able to recover.

> *14% of black students and 0% of socioeconomically disadvantaged students are estimated to have received high-quality remote instruction during the pandemic.*

It's understandable that most teachers were flustered when they were thrown into the unfamiliar territory of distance learning, many without access to training to build the new skills and competencies they would need to provide high-quality virtual core instruction for students. But continuing distance learning and hoping that students will experience an achievement boost once schools reopen in person is not an option. Virtual instruction must improve dramatically – now.

Tough instructional questions educators grapple with as virtual instruction continues

Distance learning is not going away anytime soon. **Seventeen** of the 20 largest school districts are reopening with remote learning only, which affects over **4 million** students. Of the 461 districts nationwide tracked by EdWeek, **221** are opening with remote learning only and **93** are opening in a hybrid model as of August 7th, 2020 – which equates to **68%**. (Education Week, 2020).

Even schools that are reopening in-person may have to shut down again. Already, more than 2,000 students, teachers, and staff have been placed under quarantine in the few districts that have reopened. The CDC warns about a second wave as this could be "the worst fall, from a public health perspective, we've ever had" (Karimi et al., 2020).

As many schools prepare for several more months of distance learning, educators will be faced with further challenges.

Many are wondering:

- How do I engage my students over long periods of distance learning?
- What are effective routines for virtual classrooms?
- How do I progress monitor learning during online instruction?
- How do I set up effective student grouping tasks and routines online?
- What do I do if students are struggling?
- How do I keep students motivated?
- What is effective pedagogy for distance learning?

Eight skills teachers urgently need to strengthen virtual tier 1 core instruction

As teachers, students, and parents across the nation can attest, traditional classroom instruction does not translate well to distance learning. If teachers are not supported to "reskill" for distance learning (learn new skills to teach in a virtual environment), the achievement gaps will continue forming into achievement chasms unabated.

Which instructional skills will help teachers yield the best results in a virtual learning environment?

1. Facilitation of positive relationships with and among students in a remote environment

Students need positive relationships and connections now more than ever. Many have experienced trauma and stress due to COVID-19 and have not been able to connect with many people outside their family while in quarantine. They also lost the opportunities for the everyday social interactions they had in the classroom, cafeteria, and on the playground where they could naturally build bonds with their teachers and peers. In a virtual environment, teachers must have a new set of skills and strategies to intentionally connect with their students and foster bonds between students. Not only will positive relationships improve students' social-emotional learning, but also their academic learning as they become more motivated and can more effectively participate in collaborative learning with their peers in virtual breakout rooms.

2. Development of virtual routines for students to access tech tools and resources:

Tech tools are essential for engaging students in a remote environment and giving them access to the resources they need to learn. But many teachers, students, and parents experienced frustration with unfamiliar tech tools during the pandemic. Even if the tools were not completely new, students may not have been accustomed to using the tools by themselves. Teachers can minimize frustration by developing logical systems and routines for students to use tech tools and access resources in an efficient way – and, most importantly, less instructional time will be wasted.

3. Creation of student roles for working in groups with self-management and student agency:

Students should be able to engage in meaningful collaborative work with their peers during virtual instruction – but they can't simply be grouped into breakout rooms with the expectation that they will figure out how to work together. Teachers must be intentional about creating student roles that provide students with clear responsibilities and expectations so they can self-manage. When students have this clarity, they become empowered with agency over their own learning. Student agency is especially important in a virtual environment where students have to take on more responsibilities than they may have been accustomed to during in-person instruction. For example, students might need to manage their own time and watch lesson recordings before live virtual instruction. Not all students have parental or guardian supervision to help them stay on track. But when students know their peers are counting on them to come prepared and be able to fulfill their role, students are more likely to be motivated and engaged – as long as the teacher knows how to design roles effectively.

4. Ability to lesson plan by identifying standards and learning targets:

Even with in-person instruction, it is important that teachers plan lessons by identifying standards and corresponding learning targets. These learning targets can be used by students to understand if they've accomplished their learning and allow teachers to verify if students have mastered the full intent and rigor of the standard. In a virtual environment, the strengthening of this skill is even more important because lesson formats and cadences are changed. Teachers need to develop the ability to translate lessons to virtual without losing focus on the learning targets and standards. For example, a teacher might be used to a 45-minute instructional time slot in person, but they need to be able to effectively adapt and break apart the lesson for shorter virtual sessions while still ensuring students reach their learning targets.

5. Proficiency with a flipped model that involves less teacher talk and more active collaborative learning:

Teachers may find it much more difficult to engage students in a virtual learning environment than they did in-person. Even those with a dynamic lecture style and rapport in-person will find students less able to concentrate for long periods of content delivery in a remote environment. Also, time is more precious – teachers may have students in-person for several hours a day – but in a remote environment, they need to make the most of the limited amount of live virtual time they have together. Teachers can utilize a flipped model that involves "mini-lessons" and other pre-work and focus the live virtual instruction on active collaborative learning. Flipped lessons must be carefully engineered to set students up for rich learning in their breakout groups and teachers should be ready with strategies to intervene with students who were not able to complete the pre-work.

6. Expertise in rigorous, standards-aligned tasks that work in virtual, blended, and face to face settings:

Rigorous, standards-aligned tasks are a vital part of any type of instruction, but in virtual instruction they are even more important. Again, students are more likely to have difficulty concentrating and disengage when instruction is virtual. Tasks must be engaging and challenging enough for students to want to invest their effort and achieve their learning targets. It is imperative that all students have access to rigorous, standards-aligned work so they can begin to catch up and accelerate their learning. The time that teachers invest in developing these tasks will not be wasted when schools go to blended or fully in-person learning – if teachers develop expertise in designing adaptable lessons, the tasks will be ready for virtual, blended, or face to face lessons.

7. Development of structures to verify student learning and offer real-time micro-interventions:

In the classroom, teachers could verify student learning by circulating to check student work, pulling small groups or individuals, collecting papers, and other means. Teachers could jump in the moment they saw gaps forming and provide interventions. But virtual instruction makes those methods difficult, and many teachers are not sure how to be responsive to students in a remote environment. Teachers need new structures for verifying student learning and providing real-time micro-interventions in order to begin closing achievement gaps and preventing further gaps during virtual instruction.

8. Utilization of methods to gather student evidence and track progress:

Similarly, teachers need a new set of tools to gather student evidence and keep track of progress – and so far, these structures have been largely absent during the pandemic. With systems such as attendance, grading, and state assessments thrown into disarray for many districts during remote instruction, structures for gathering student evidence and tracking real-time learning progress are sorely needed. Teachers must be equipped with methods for determining whether their lessons are effective and achieving the intended results with students.

In addition to supporting teachers in developing these new skills, leaders must also be ready with tools and processes for monitoring the quality of virtual instruction and keeping track of student data. While leaders cannot visit physical classrooms to look for evidence, it is important that they do virtual visits and have virtual protocols for observations, coaching, and feedback to teachers.

How can we accelerate teachers' virtual teaching skills and students' learning?

The depth and number of new skills teachers must master in order to strengthen virtual core instruction may seem daunting. At Learning Sciences, we responded to this urgent need by developing the research-based **Virtual Core Instruction Power Pack.**

Building practical skills that boost virtual instruction and transfer to in-person classrooms

The Power Pack is the equivalent of three days of expert-led live training delivered in flexible increments according to educators' schedules and needs. The professional learning is intensive, interactive, and designed to immediately boost the quality of virtual instruction.

The time that teachers invest in developing virtual core instruction skills and lessons will not be wasted when schools go to blended or fully in-person learning – everything teachers invest in their professional learning now can translate seamlessly back to the physical classroom.

- The **first day** focuses on establishing virtual classroom procedures, student roles, and strong, trusting relationships in the virtual environment.
- The **second day** helps teachers create learning tasks for virtual breakout rooms and addresses topics of the "mini-lesson format" that shifts learning responsibility toward student-centered learning on group tasks.
- The **third day** fills the critical need of showing teachers how to progress monitor for real-time learning in a virtual classroom, including how to verify that individual students are learning and what to do if they are not.

The Virtual Core Instruction professional development is enhanced by live virtual expert coaching to teachers and professional learning community (PLC) leaders to support effective transfer of the practices into virtual lessons and classrooms.

Quality control and feedback systems for virtual core instruction and school and district leadership

One of the strongest aspects of the Virtual Core Instruction Power Pack is the research-based progress monitoring data tool called **Virtual RigorWalk**. The data tool is based on the extensive research base of the Rigor Diagnostic developed by LSI's Applied Research Center (Basileo & Lyons, 2019).

District and school leaders can use the Virtual RigorWalk tool with the virtual classroom visit protocol and training to data monitor the quality of virtual classroom instruction. This tool and process are specifically designed to accelerate student learning and close learning gaps in virtual instruction.

The techniques and strategies from both the Virtual RigorWalk and Virtual Core Instruction Power Pack easily translate to both in-person and blended learning classroom settings, ensuring that as circumstances change, students and teachers experience smooth transitions and consistent, high-quality instruction.

Proactively close gaps now and prevent a COVID-19 lost generation

The only way to ensure we do not have a lost COVID-19 generation is for schools to get proactive now at strengthening virtual core instruction. An entire generation of students is counting on us to not only catch them up, but also to help them get ahead with the skills to succeed in an unstable economy.

COVID-19 equity gaps will only exacerbate the longer we wait to close them. Accelerating learning and closing gaps through strengthening virtual core instruction is the proactive way to close the COVID-19 chasm before it is too late for our students.

School leaders can actively close these gaps now before they widen into chasms by supporting educators to develop eight virtual teaching skills that can make all the difference to close the learning gaps among students and accelerate learning online for all students.

Resources

- Achievement Gaps Webinar Replay
- Virtual Core Instruction Power Pack
- Free Socially Distant Schools Resources

Power Up Your Virtual Learning Today

Talk to an Expert

VIRTUAL CORE INSTRUCTION
POWER PACK

References

Basileo, L.D., and Lyons, M.E. (2019). *The research base supporting the Rigor Diagnostic observation instrument*. Learning Sciences International, West Palm Beach. https://www.learningsciences.com/wp/wp-content/uploads/2020/08/LSI01-121-Rigor-Diagnostic-Observation-12-18-2019.pdf

DELVE Initiative (2020), *Balancing the Risks of Pupils Returning to Schools*. DELVE Report No. 4. Published 24 July 2020. http://rs-delve.github.io/reports/2020/07/24/balancing-the-risk-of-pupils-returning-to-schools.html

Dorn, E., Hancock, B., Sarakatsannis, J., and Viruleg, E. (2020, June 1). *COVID-19 and student learning in the United States:* The hurt could last a lifetime. McKinsey & Company. https://www.mckinsey.com/industries/public-sector/our-insights/covid-19-and-student-learning-in-the-united-states-the-hurt-could-last-a-lifetime

Education Week. (2020, July 15) *School Districts' Reopening Plans: A Snapshot.* Retrieved August 13, 2020 from https://www.edweek.org/ew/section/multimedia/school-districts-reopening-plans-a-snapshot.html

Fairlie, R. (2020, May 23) *The impact of COVID-19 on small business owners: Evidence of early-stage losses from the April 2020 current population survey.* Stanford Institute for Economic Policy Research. https://siepr.stanford.edu/sites/default/files/publications/20-022.pdf

Karimi, F., Almasy, S., and Andone, D. (2020, August 14). *Rushing reopening could have devastating consequences, Dr. Fauci says.* CNN. https://www.cnn.com/2020/08/13/health/us-coronavirus-thursday/index.html

McCaffrey, D. F.., Lockwood, J. R., Koretz, D. M., & Hamilton, L. S. (2003). *Evaluating value-added models for teacher accountability.* RAND Corporation. http://www.rand.org/pubs/monographs/2004/RAND_MG158.pdf

Mendro, R. L. (1998). Student achievement and school and teacher accountability. *Journal of Personnel Evaluation in Education,* 12, 257–267.

Pensiero, N., Kelly, A., and Bokhove, C. (2020, July 23) *Covid-19 lockdown primary-secondary education impact.* University of Southampton. https://www.southampton.ac.uk/news/2020/07/lockdown-education-impact.page

Thorbecke, C. (2020, July 16). *As COVID-19 financial crisis wages on, some economists warn of a divergent 'K-shaped' economic recovery.* ABC News. https://abcnews.go.com/Business/covid-19-financial-crisis-wages-economists-warn-divergent/story?id=71772509

United Nations (2020). Policy brief: Education during COVID-19 and beyond. United Nations. https://www.un.org/sites/un2.un.org/files/sg_policy_brief_covid-19_and_education_august_2020.pdf.

Our vision for education is to close the achievement gap. Equip all students with the social, emotional, and cognitive skills they need to thrive in the 21st century. Expand equity by giving every child access to rigorous core instruction that empowers learners to free themselves from generational poverty.

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