

Operation Connectivity: Initial connectivity guidance for LEAs (SY 2020-2021)

Operation Connectivity Disclaimer

Please note that Federal, State, and Local regulatory compliance still applies. LEAs are solely responsible for ensuring compliance with all relevant regulations, including but not limited to FERPA, E-Rate, HIPAA, CIPA, EDGAR, and SB820.

LEAs should stay vigilant to protect confidential student information. Practice caution when handling student data, especially in interactions and negotiations with outside parties (e.g., vendors, ISPs, etc.). Consider security implications with all new digital solutions and procurement practices. See guidance online at <https://tea.Texas.gov/coronavirus> on [Reporting & Data](#).

These materials are the first of many drafts. Operation Connectivity will continue to communicate best practices and other supporting resources as they develop.

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Operation Connectivity Overview

What is Operation Connectivity?

Overview

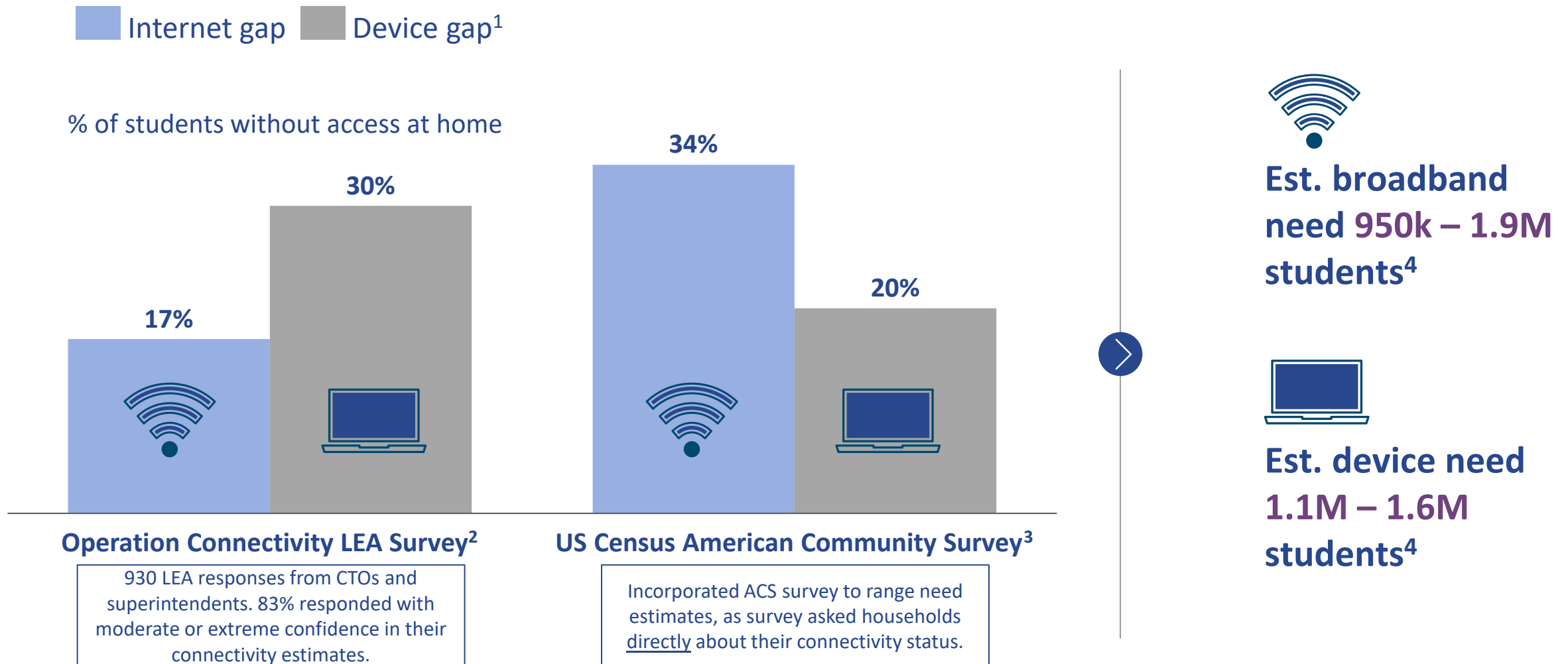


Operation Connectivity is a partnership between Governor Greg Abbott, the Dallas Independent School District, and the Texas Education Agency to connect all of Texas's 5.5 million public school students with a device and reliable internet connection. Consisting of an executive committee and six working teams, Operation Connectivity addresses key topics such as technology, policy, and funding to provide a pathway for LEAs to connect their students.



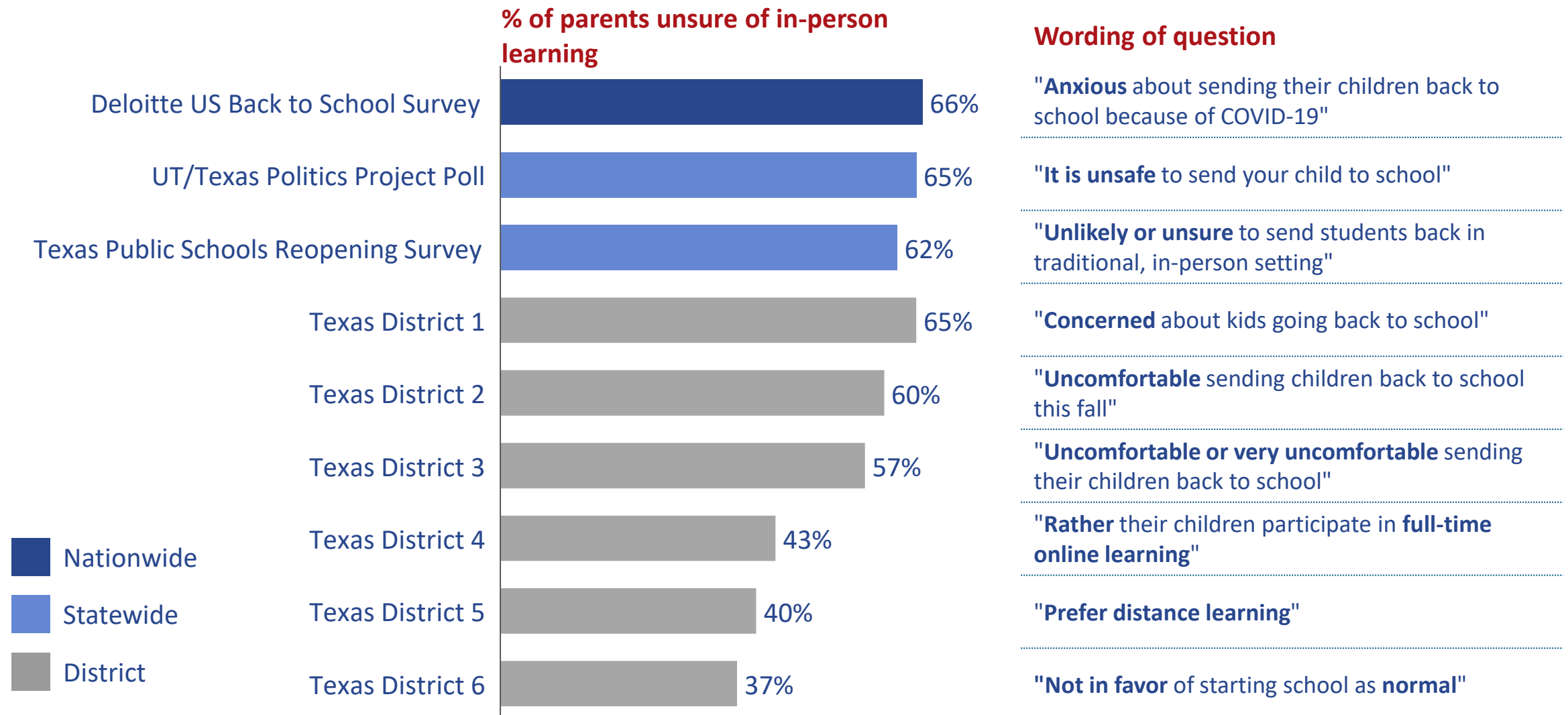
Current Data on the Connectivity Gap

LEA survey suggests 17% of Texas students lack access to high speed internet and 30% lack a dedicated and adequate learning device¹ at home.



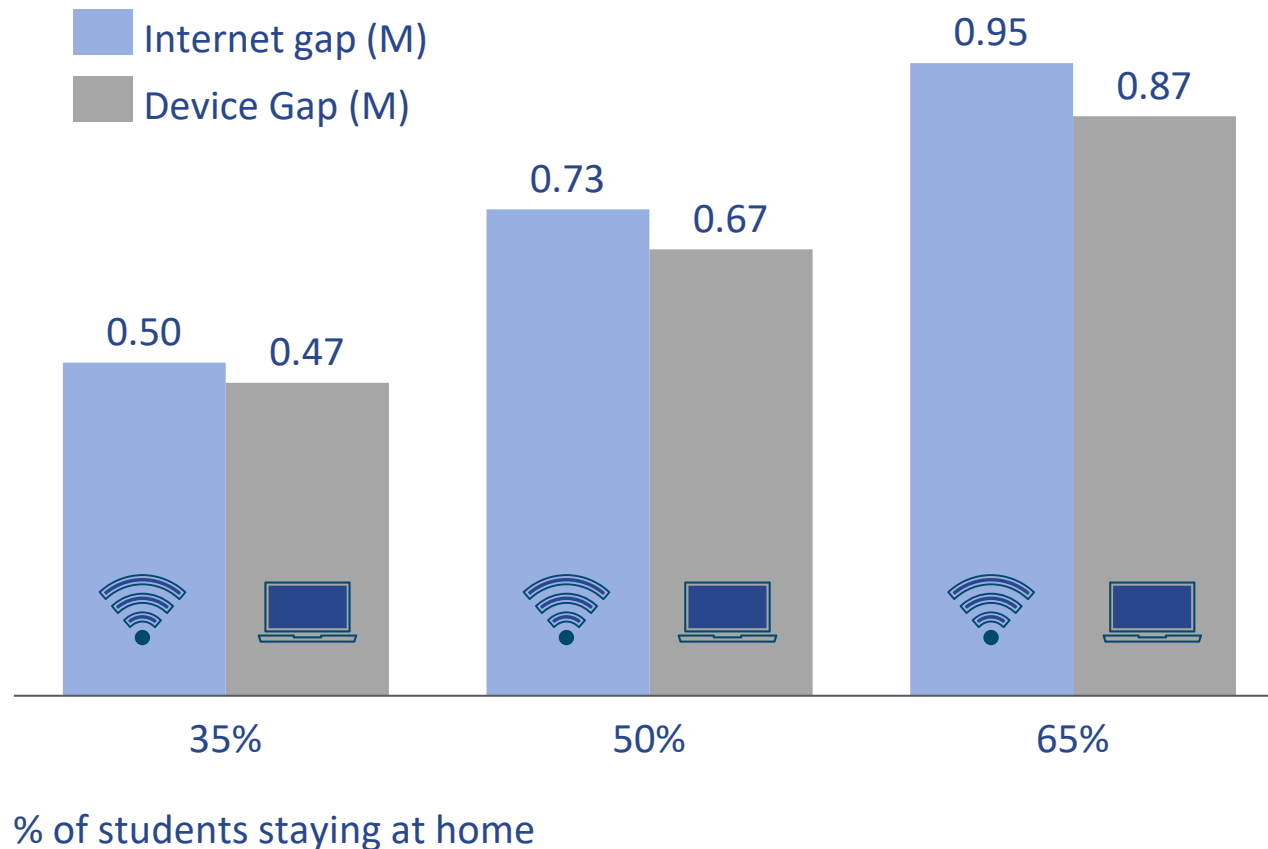
1. Device gap defined as a student not having a laptop or tablet. 2. Results from Operation Connectivity Survey of LEA CTOs and superintendents. n=930 3. 2018 US Census American Community Survey, filtered for Texas 4. Total estimated student need calculated by applying percent of Texas students without both broadband or laptop/tablet to total enrollment in Texas Public Schools 2018-2019, segmented by district type (urban, suburban, rural, etc.)

Recent parent sentiment surveys reveal between 35% and 65% of parents are unsure about sending their kids back to school in the fall.



Source: <https://www2.deloitte.com/us/en/insights/industry/retail-distribution/back-to-school-survey.html> ; <https://texaspolitics.utexas.edu/set/it-safe-or-unsafe-send-your-child-school-june-2020>; TEA back to school survey conducted by HEB consumer team; Publicly available news sources

LEAs will need to triage the immediate need of students without connectivity for those that choose to do remote learning.



Short term: Estimated **80-95%** of student need can be met with hotspots and preexisting fixed internet infrastructure¹.
Note: these are statewide averages and each district may have a different view.

Medium term: Explore **creative solutions** to bring online concentrated areas of students with no internet.

Long term: Opportunity to **pursue infrastructure builds** to permanently bring students online with sustainable connection.

1. Rural ESC estimates; EducationSuperHighway analysis of Texas Broadband - <https://digitalbridgek12.org/states/budget-calculator/>
Note: Assumes 1.45M students lacking broadband and 1.35M students lacking devices (Average of LEA survey and ACS estimate)

Research indicates that quality internet connectivity at home is critical for academic success.



At-home internet gives advantage for online assignments¹

- >70% of students in grades 6 – 12 are required to use the internet for homework multiple times per week.
- 64% of students with no home internet access report they regularly cannot complete homework due to lack of internet.



Access to internet at home determines level of digital skills²

- After controlling for variation in home Internet access, there is no difference in the level of digital skills reported by low income, minority students, or students from single parent households.



At home connectivity drives higher academic performance³

- Students with fast home Internet access report an overall GPA ~0.4 points higher than students with no access.
- Students who are dependent on a cell phone for their home Internet access averaged 5 pts lower on the SAT/PSAT.
- In Texas, there is a correlation between LEA A-F scores and % household connected to internet⁴.



Connectivity critical to mitigate learning gaps during ongoing disruption

- 2019 – 2020 school year projected to yield 63-68% of the learning gains in Reading relative to a typical school year, 37-50% of the learning gains in Math⁵.
- A survey of 800 parents by Caissa public strategy, shows 89% of parents are "concerned about their child's safety at school in relation to COVID-19⁶."

1. Project Tomorrow, Speak Up Survey, 2016 – 2020 2. National Bureau of Economic Research, Education Technology: An Evidence-Based Review, 2017 3. Quello Center, Broadband and Student Performance Gaps, 2020 4. ParkHillSmith & Cooper 5. Annenburg Institute, Projecting the potential impacts of COVID-19 school closures on academic achievement, 2020 6. Caissa Public Strategy, Parents' Concerns About Returning to School since Covid-19, 2020

LEA Checklist to Close the Connectivity Gap

Playbook Objectives

Operation Connectivity's initial playbook is for LEA use in consideration as they continue to triage and solve the immediate connectivity needs of their students. It is not prescriptive or mandatory, but can serve as a guide to whatever degree an LEA sees fit.

This is an iterative document that will continue to be improved and expanded as Operation Connectivity gathers more best practices from LEAs, ESCs, and subject matter experts.

LEA checklist to close the connectivity gap



Identifying & Tracking Specific Student Needs

- ✓ Identify and size immediate connectivity gap through surveys
- ✓ Continuously collect student connectivity information



Broadband Solutions



Learning Device Solutions

Selection	✓ Select based on LEA student density & broadband availability	✓ Select specifications based on maintenance & refresh req's
	<ul style="list-style-type: none"> ✓ Integrate connectivity with broader technology and learning environment ✓ Identify multiple and/or concurrent solutions to cover all immediate need 	
Procurement	<ul style="list-style-type: none"> ✓ Determine tech specs and scope of program to determine purchase volume ✓ Explore channels (e.g., current contracts, LEA/ESC pooled contracts) ✓ Negotiate with vendors and issue a P.O. 	
Deployment	<ul style="list-style-type: none"> ✓ Calibrate devices and prepare asset tagging & acceptable use policies ✓ Distribute while social distancing (e.g., drive-through, appointment pick-up) 	
Management	✓ Protect student data with ISP billing	✓ Improve family/student/teacher technical literacy
	<ul style="list-style-type: none"> ✓ Establish repairs & maintenance protocol through the vendor and/or LEA ✓ Stand up central help-desk to service students/families/teachers ✓ Establish appropriate security (e.g., content filtering, vetting online educational materials) 	



Possible Funding Solutions

- ✓ Identify funds available for immediate use, for example:
 - LEA reserve fund balance
 - Technology and Instructional Materials Allotment
 - Private sector and philanthropic partnerships

Identifying and Tracking Specific Student Needs

**Operation
Connectivity has
created two methods
of data collection you
can use to identify
student need for
devices and internet.**

1

Registration questions – *highly suggest implementation as soon as possible*

- Four questions to include in your registration process to identify which students lack sufficient internet and/or learning devices. By serving as your baseline data for students each year, these questions can also help maintain data long-term.

2

Family survey

- An in-depth survey to send to families to understand the root causes behind the connectivity gap. These questions can identify your students' immediate connectivity need, as well as help you plan for long-term solutions. See the next slide for survey administration best practices.

Four registration questions to collect continuous connectivity data



Internet Connectivity

1. Which best describes your internet connectivity? (*button*)
 - a. I access the internet at home through a fixed connection (e.g., DSL, fiber, cable, etc.), satellite, fixed wireless, or hotspot.
 - b. I access the internet primarily through my phone.
 - c. I access the internet in public spaces (e.g., library, businesses).
 - d. I do not have internet connectivity.
2. Which of the following activities do you perform in your home with ease? (*Yes/No*)
 - a. Surf the web (e.g., check email, read the news)
 - b. Browse social media
 - c. Download pictures and videos
 - d. Watch Netflix and use other streaming services
 - e. Participate in live videoconferencing
 - f. Play online, live video games (e.g., Fortnite, Call of Duty, League of Legends)

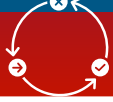


Learning Device

3. Does your child have access to a learning device (defined as laptop, Chromebook, or tablet) at home? (*button*)
 - a. Yes, student has a dedicated learning device to use at any time during the day.
 - b. No, student shares a learning device with family members, students, and/or adults.
 - c. No, student does not have a learning device.
4. Please list how many of the following devices are active, functioning, and available for your child to use for learning? Select all that apply. (*multiple response*)
 - a. Desktop computer
 - b. Laptop (e.g., MacBook)
 - c. Chromebook
 - d. Tablet (e.g., iPad, Kindle)
 - e. Smartphone
 - f. Other (please specify)
 - g. No devices in the home

Survey administration best practices

Pre-Survey



Communicate

- **Set deadline for completion** (2-3 weeks).
- **Pre-announce survey** explaining survey's purpose and the importance of completion.
- **Incentivize completion** (e.g. school with highest % of survey completion receives reward, etc.) .
- **Emphasize confidentiality** of responses (e.g. shared only with school admin.).

Test

- **Pilot survey** for technical glitches, completion time (<10min.), mobile compatibility, and language translation.
- **Verify contact information** for families in student information systems
 - Phone number
 - E-mail address
 - Physical address

During Survey



Share and Support

- **Administer survey** sharing link via e-mail, text, and student information auto-dialers directing families to survey webpage.
- **Create in-person avenues** for completion (e.g. in-person at school, Back to School Nights, paper surveys sent home with students).
- **Call non-respondents** or complete home visits midway through window to provide reminders and offer support (e.g. mobilize volunteers or community members).

Monitor

- **Track completion** regularly
- **Update all stakeholders** with time left to complete, % completion by school, and % completion across LEA.

Post-Survey



Analyze

- **Review responses** and follow recommended next steps outlined in this playbook.
- **Consider weighting responses** if survey respondents are not representative of all socioeconomic backgrounds.
- **Consider options** to follow-up with non-respondents.
- **Prioritize** follow-up with families of students identified as highest need (e.g. free and reduced lunch enrollment and/or special populations).
- **Determine** remote learning specifications while considering student connectivity levels.

Report back

- **Share results** with all stakeholders via LEA/school websites, e-mail, and town halls (virtual or in-person).
- **Explain next steps** to all stakeholders.

Broadband Solutions

Four internet solutions to consider as you triage



Mobile broadband via hotspots



Subscription to fixed internet connection



Mixed methods to immediately address broadband/mobile gaps

Deploy hotspots

Provides connectivity (that does not require a fixed receiver) through mobile broadband provider.

ISP payments

For families to connect to fixed locations with wired technology (DSL/ADSL, cable, fiber, fixed wireless)

- ISP services paid for by LEAs: services for given address pre-paid directly to ISPs by LEAs
- ISP services subsidized by LEAs: vouchers provided to parents to pay ISPs for home service

Share low-cost ISP info with families¹

Identify and provide low-cost ISP information to families to connect to fixed locations with wired technology (DSL/ADSL, cable, fiber, fixed wireless).

Supplemental options

Various solutions (Cellular on Wheels, Wi-Fi buses, meshed network, satellite, microcells) to address areas where other options are not viable

1. Supplemental action to take regardless of solution

Consider which short-term strategy to address connectivity gap is best fit for your LEA



Mobile broadband via hotspots



Subscription to fixed internet connection



Mixed

Strategy:	Deploy hotspots	ISP payments	Share low-cost ISP info with families ¹	Supplemental options
Use cases	<p>Rapid implementation needed without specific data about students who need connectivity (i.e., address)</p> <p>Students who need connectivity have no fixed connection available in their home.</p> <p>Transient student population</p>	<p>Areas with available connection, where affordability is the biggest barrier to adoption.</p> <p>More details to come</p>	<p>When LEA has insufficient budget to subsidize internet connection for students</p> <p>Areas with available connection, where awareness is a significant barrier to adoption</p> <p>For sustainability, transition students from hotspots to fixed connection where necessary infrastructure exists.</p>	<p>Rural / remote geographies with no wired or wireless service</p> <p>High concentration of students who need internet living within 1 – 2 mile radius</p>
Pros	<ul style="list-style-type: none"> • Flexible coverage; circumvents primary barriers to adoption • Can be procured, distributed, and managed centrally by LEA 	<ul style="list-style-type: none"> • Infrastructure exists in many parts of the state (~90% of students likely have fixed connection nearby) • Stable, reliable connection that multiple members of household can use concurrently • Possible long term solution 	<ul style="list-style-type: none"> • No lead time required 	<ul style="list-style-type: none"> • Can close the connectivity gap where other solutions are not viable
Cons	<ul style="list-style-type: none"> • Possible spotty coverage based on location; Less stable connection • Possibility to slow significantly with increased traffic • Low data caps can throttle or cut off service 	<ul style="list-style-type: none"> • Likely constrained coverage in some areas depending on physical infrastructure • In-home installation is difficult to manage; requires collaboration from vendor • LEAs with high mobility must navigate cancelling and transferring services • Longer lead time to negotiate with ISPs • Complex billing and implementation (e.g., how to pay, security) 	<ul style="list-style-type: none"> • Relies heavily on family adoption, but does not address largest barriers to adoption (e.g., affordability) 	<ul style="list-style-type: none"> • Generally more costly solution • Often dependent on high level of engagement from local ISP

¹. Supplemental action to take regardless of solution.

Hotspot selection: sample specifications



Specifications are ideal for synchronous learning model; adaptations to be considered for other virtual learning models

Technical requirements

Coverage	<ul style="list-style-type: none">LTE towers within ~20 miles¹<ul style="list-style-type: none">Likely to have "dead zones" due to geographic features, distance from towers
Speed	<ul style="list-style-type: none">4G LTE; 25 Mbps minimum download speed<ul style="list-style-type: none">Expect significantly reduction from max speed due to network trafficCategory 4+ hotspot device²Hotspot device to make usage easier (e.g., Mi-Fi rather than a smartphone)
Data	<ul style="list-style-type: none">Unlimited data without caps or throttles
Filtering ³	<ul style="list-style-type: none">CIPA compliant

Operational requirements

Contracting	<ul style="list-style-type: none">1 – 2 full year contract without fees for reduced use over summer monthsUnified/simplified billing (e.g., one-time payment)No sharing of student dataGuaranteed, timely deliveries at appropriate scale (i.e., no supply chain constraints)
Deployment	<ul style="list-style-type: none">Device management with asset taggingFull replacement warranty, including maintenanceSimple setup and user instructions in 5 languagesDedicated help-line
Enrollment	<ul style="list-style-type: none">N/A – LEA procures hotspot and service, manages enrollment for individual studentsData reports on student usage

1. 20 miles refers to flat terrain with little to no signal interference. LTE towers must be closer (~3 miles) in areas with topography that is more varied (e.g., many hills, trees, buildings); 2. Both hotspot devices and routers may have additional technical requirements based on need for cyber security or filtering software; 3. Effective filtering can be done without specific filtering requirements on the technology

Hotspots: Considerations to procure and deploy



Procure

- **Select the hotspot solution, considering:**
 - Student density, cellular strength & reliability
 - LEA's learning environment and broader technology plan
 - Special education needs and requirements
 - Administrator/teacher/parent feedback
- **Procurement process**
 - Create procurement schedule
 - Determine needed tech specs – [see full list on previous page](#)
 - Determine volumes needed likely through survey
 - Build cost estimate that considers total cost of ownership (e.g., maintenance, repair, refresh cycle, loss and stolen, asset tagging, call center)
 - Explore expedited LEA-level procurement processes with local authorities
 - Consider procurement channels (e.g., current LEA/state contracts, pooled contracts across LEAs/ESCs)
 - Gather pricing and negotiate with vendors (including Data Use Agreement language within procurement process, supply chain constraints) and qualify procurement goals (e.g., lowest up-front and on-going costs and supply chain security)
 - Establish repair & maintenance SLAs in contracts
 - Issue a P.O.
 - Procure web filtering solution that will support off-network functionality

Deploy

- **Distributing while maintaining social distancing**
 - Prepare device acceptable use policies and receive family consent
 - Establish asset tagging and verify asset inventory
 - Configure devices
 - Collect student information at distribution (e.g., student ID)
 - Drive-through, home delivery, pick-up by appointment, etc.
 - Including in other wrap-around services (e.g., food distro)
 - Prioritizing device receipt order (e.g., high school students, special education students)
- **Enabling families, students, and teachers:** Simple setup instructions and user guides translated to relevant languages

Hotspots: Considerations to manage



Manage

- **Help-desk:** central resource for all campuses provided by LEA or vendor/ISP. Extend hours during crisis and consider flexing current or auxiliary staff to help. Offer multilingual assistance. Triage to prioritize staff. Schedule 1:1 appointments for major issues. Publish FAQs to answer common questions. Within ticket system or online document sharing platform, ensure response and resolution SLAs are set to monitor customer service KPIs.
- **Repairs and maintenance:** negotiate with vendors for free or inexpensive repairs and replacement agreements for broken devices. Consider alternative uses or return/replacement policies for unused or inoperable hotspots.
- **Inventory management:** require asset tagging for hotspots and incorporate into inventory management system. Have procedures to address student mobility and graduating classes. Incentivize device return (e.g., require at registration). Require families to sign user agreements.
- **Security:** content filtering (e.g., CIPA standards). Protecting student data from ISPs, either through centralized billing process and/or negotiating for ISPs to require less personal information.
- **Billing:** consider a unified, centralized billing system with the ISP to protect student information, increase family adoption, and negotiate more favorable prices. Consider requiring a small family contribution, directly to the school or ISP, if feasible.

Fixed internet selection: sample specifications



Specifications are ideal for synchronous learning model; adaptations to be considered for other virtual learning models

Technical requirements¹

Coverage	<ul style="list-style-type: none">• ISP to provide detailed coverage map<ul style="list-style-type: none">- Expect urban areas and North/East Texas regions to have at least 1-2 providers available per household
Speed	<ul style="list-style-type: none">• 25 Mbps minimum download speed<ul style="list-style-type: none">- Expect some/intermittent reduction from max speed due to network traffic• Wi-Fi protocol: 802.11ac or latest²
Data	<ul style="list-style-type: none">• Unlimited data without caps or throttles
Filtering	<ul style="list-style-type: none">• CIPA compliant

Operational requirements

Contracting	<ul style="list-style-type: none">• TBD
Deployment	<ul style="list-style-type: none">• Asset tracking (routers)• Reporting on uptake/usage• Full replacement warranty, including maintenance• Distribution logistics (e.g., drop shipping where needed)• Installation / set-up support• Dedicated help-line
Enrollment	<ul style="list-style-type: none">• Intake data from campuses; run outreach to families (e.g., student information auto-dialers)• Limited restrictions on participation (e.g., no credit requirements)

1. Technical specifications for fixed internet subscription are relevant for satellite internet, as well as DSL/cable/fiber; 2. Current infrastructure may not allow for speeds as high as 25 Mbps download speed. Consider lowering this threshold for asynchronous learning; 3. Both hotspot devices and routers may have additional technical requirements based on need for cyber security or filtering software



Plan

- **Identifying LEA needs**
 - Number and identities of unconnected students
 - Identify low cost plans offered by internet service providers in region
- **Technology specifications to consider**
 - High speed (25 Mbps at minimum)
 - Unlimited data with no throttles or choke-points
- **Points to negotiate for with ISPs**
 - LEA may be able to lobby local ISPs to relax qualification requirements for low cost plans

Deploy

- **Develop resources to promote all low cost options**
 - Create flyer with low-cost plan offerings including name of plan, monthly recurring cost, setup cost, eligibility, and setup logistics
 - Place flyer and ISP tear sheets at central locations (e.g. school front office, district office, D.M.V.)
- **Encourage and support broadband adoption**
 - LEA educates students and families on importance of connection and low-cost opportunities (e.g., by phone, newsletter)
 - LEA supports families with contacting ISP and sign-ups (e.g. school Connectivity Fair to share offerings and assist with signup)
 - ISPs own installation and set-up
- **Monitor progress of household sign-ups**
 - Conducting pulse assessments of connectivity to track adoption

Examples of ISP offerings for low-income households in TX¹

Provider/Plan	Price per month	Eligibility
AT&T "Access"	\$10	Supplemental Nutrition Assistance Program (SNAP)
Charter Spectrum "Internet Assist"	\$14.99	National School Lunch Program (NSLP), Social Security (SSI)
Frontier "Lifeline discount"	\$21	Enrolled in Lifeline program
Grande "Internet First"	\$9.95	Low-income (e.g. SNAP, Housing Assistance, etc.)
Sparklight COVID-19 Relief	\$10 for 3 months	No documentation required for sign up
Suddenlink Altice Advantage Internet	\$14.99	National School Lunch Program (NSLP) or Supplemental Security Income (SSI)
Xfinity "Comcast Essentials"	\$9.95	Low-income (e.g. SNAP, Housing Assistance, etc.)

1. Offers and availability may vary by location and are subject to change.



Cellular technology

Areas in which students have LTE devices, bandwidth is limited

Microcells

- "Mini cell towers," provide cellular signal
- Need established fiber connection to create cellular signal
- Useful in high student density areas
- Range up to ~1500 ft
- Requires network equipment (e.g., modem) installed in the home

C.O.W.S

- "Cellular on Wheels," creates or amplify cellular signals
- Useful in areas that lack mobile coverage (albeit typically used for brief periods)
- Range up to ~600 ft

Wi-Fi technology

For densely populated areas, particularly those with limited cell service

Wi-Fi Buses

- School bus equipped with hotspot
- Need strong cellular signal
- Mobile solution; can serve several areas throughout the day
- Range up to ~300 ft

Meshed network

- Communications network of small radio transmitters (essentially wireless routers)
- Need at least one fixed wired connection in network
- Can be difficult to scale
- Useful where there is limited wired availability

Shared access points

- Single high-range fixed connection point
- Needs high power Wi-Fi router, extender, and/or boosters to extend service from connection point
- Useful in wired, multi-unit housing
- Range 150 ft+

Satellite technology

Rural / remote geographies with no wired or wireless service

Satellite

- Satellite dishes provide access by communicating with communication satellites
- Useful in very remote areas (where there is no other viable option)
- High latency makes conferencing difficult to impossible
- Requires in-home installations
- Range up to ~150 ft

Learning Device Solutions

Learning device selection: Sample specifications

Specifications are ideal for synchronous learning model; adaptations to be considered for other virtual learning models




Technical requirements

Power	<ul style="list-style-type: none">• CPU Speed: 2 GHz or higher• RAM: 4GB or higher• Hard drive size: 64 GB or higher
Features	<ul style="list-style-type: none">• Screen size: 10" or larger• Integrated Camera and Microphone• Integrated or External Keyboard• ADA compliant
Data	<ul style="list-style-type: none">• Wi-Fi Protocol: 802.11ac or Latest• [Optional] Integrated LTE
Software	<ul style="list-style-type: none">• Pre-loaded: Operating system and applications (e.g., word processing, presentation)

Operational requirements

Contracting	<ul style="list-style-type: none">• TBD
Deployment	<ul style="list-style-type: none">• Asset tagging• Device management (e.g., track usage)• Full replacement warranty, including maintenance• Distribution logistics (e.g., drop shipping where needed)• Dedicated help-line• [Optional] Protective case
Enrollment	<ul style="list-style-type: none">• N/A – LEA, manages enrollment for individual students

Three device types most often used by LEAs

Device	Chromebooks	Laptops	Tablet
Typical age range	2 nd -12 th	9 th -12 th	PreK-2 nd ; PreK-All
Pros	<ul style="list-style-type: none"> • Inexpensive purchase and repairs • Easy to use and intuitive for student • Cloud filtering and authentication simple for schools • Easy integration with popular tools (e.g., Classroom, Docs, Sheets) 	<ul style="list-style-type: none"> • More capabilities and capacity • Systems compatibility for future professional work • Wider availability • Longer-lasting, durable • More leasing options 	<ul style="list-style-type: none"> • Attachable keyboard • Double facing camera • Annotation • Touch-screen • Familiar and easy to use • Best for special education
Cons	<ul style="list-style-type: none"> • Backordered • Limited functionality • Licensing and expiration (early obsolescence) 	<ul style="list-style-type: none"> • Expensive • Difficult to administer (e.g., filtering) 	<ul style="list-style-type: none"> • Expensive • Licensing and expiration (early obsolescence)
Illustrative device options	 <p>HP Chromebook 11 G5 Screen: 11.6" RAM: 4GB Hard drive: n/a Webcam: Yes</p> <p>\$199</p>	 <p>Dell Inspiron 14 3000 Screen: 14" RAM: 4GB Hard drive: 128 GB Webcam: Yes</p> <p>\$293.99</p>	 <p>iPad Screen: 10.2" RAM: 3GB Hard drive: 128GB Webcam: Yes</p> <p>\$429</p>

Examples of student laptop and tablet options

Laptops

Model	Online Price	Screen Size	CPU Speed	RAM	Hard-drive	Webcam
Dell Inspiron 14 3000	\$293.99	14"	2.3 GHz	4GB	128GB	Yes
HP Stream 11 Pro G5 Notebook	\$400.15	11.6"	2.6GHz	4GB	128GB	Yes
Lenovo Thinkpad L13	\$538.85	13.3"	2.1GHz	4GB	128GB	Yes

Tablets

Model	Online Price	Screen Size	CPU Speed	RAM	Hard-drive	Webcam
Apple iPad	\$429	10.2"	2.4GHz	3GB	128GB	Yes
Dell - Samsung Galaxy Tab	\$349.99	10.4"	2.3 GHz	4GB	64GB	Yes
Lenovo Tab M10 Plus	\$249.99	10.3"	2.3GHz	4GB	128GB	Yes



Procure

- **Select the appropriate learning device solution, considering:**
 - LEA's learning environment and broader technology plan
 - Special education needs and requirements
 - Device specification and ratio by grade level and student needs
 - Administrator/teacher/parent feedback
- **Procurement process**
 - Create procurement schedule
 - Determine needed tech specs – [see full list on previous page](#)
 - Determine volumes needed, likely through survey
 - Build cost estimate that considers total cost of ownership (e.g., maintenance, repair, refresh cycle, loss and stolen, asset tagging, licenses, call center)
 - Explore expedited LEA-level procurement processes with local authorities
 - Consider procurement channels (e.g., current LEA/state contracts, pooled contracts across LEAs/ESCs)
 - Negotiate with vendors (including Data Use Agreement language within procurement process) and qualify procurement goals (e.g., lowest up-front and on-going costs and supply chain security)
 - Establish repair & maintenance SLAs in contracts
 - Issue a P.O.
 - Procure web filtering solution that will support off-network functionality

Deploy

- **Distributing while maintaining social distancing**
 - Prepare device acceptable use policies and receive family consent
 - Establish asset tagging and verify asset inventory
 - Configure devices
 - Collect student information at distribution (e.g., student ID)
 - Develop appropriate method for distribution (e.g., drive-through, home delivery, pick-up by appointment, etc.)
 - Consider including in other wrap-around services (e.g., food distro)
 - Prioritize device receipt order (e.g., high school students, special education students)
- **Enabling families, students, and teachers:** Simple setup instructions and user guides translated to relevant languages



Manage

- **Help-desk:** central resource for all campuses provided by LEA. Prepare to answer all relevant questions (e.g., internet connectivity, device bugs, LMS usage, etc.). Extend hours during crisis and consider flexing current or auxiliary staff to help. Offer multilingual assistance. Triage to prioritize staff. Schedule 1:1 appointments for major issues. Publish FAQs to answer common questions. Within ticket system or online document sharing platform, ensure response and resolution SLAs are set to monitor customer service KPIs.
- **Repairs and maintenance:** do repairs centrally at the LEA level. Hold families minimally responsible at small scales to help fund repairs¹. Have funding in the yearly budget for repairs.
- **Inventory management:** implement before and after distribution and deployment. Have procedures to address student mobility and graduating classes. Require a small deposit from parents¹. Incentivize device return (e.g., require at registration). Consider making on-premise infrastructure updates (e.g., on-campus charging stations).
- **Refresh cycles:** ensure consistent funding for technology. Refresh frequently and in smaller loads to spread out the costs. Purchase technology with longer life spans. Factor in expected yearly loss rates in purchases.
- **Security:** try to route at-home connectivity through school network. Require devices to authenticate to the school network, or to select pre-filtered devices. Consider limiting bring-your-own-device programs for home-based learning. Filter and vet online educational materials. Teach cyber security to families. Consider making exceptions to existing security constraints (e.g., allow YouTube for instruction).
- **Family, student, and teacher technical literacy:** consider requiring teacher tech adoption within a short, fixed time frame to help them drive quality online curriculum. Avoiding paper packets except by exception. Frequent student use of tech in-class. Adopt an LMS or other tech solution to organize and administer online curriculum.

1. Note: please check with LEA policy to determine feasibility of having parents pay any amount of money for device repairs, maintenance, insurance, etc.

Possible Funding Solutions

LEA and local funding sources to support connectivity efforts for the upcoming school year



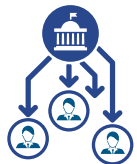
Reserve fund balance serves as a discretionary source of funds that could be used to support short-term connectivity efforts.



Technology and Instructional Material Allotment (TIMA) balance can be used to fund devices, broadband service, and IT support staff.



Private sector and philanthropic partnerships can be leveraged at the local level to provide supplemental funding source in short-term.



City/county Coronavirus Relief Funds may be leveraged to support connectivity efforts through engagement of local officials.
(Dallas ISD collaborating with city on potential use of CRF to support solution feasibility study, community Wi-Fi projects, and private cellular networks)

For encumbrances before May 20th, remember to apply for state reimbursement of COVID related expenses (state Coronavirus Relief Funds).

The TEA continues to explore the feasibility of securing additional funding sources to support LEAs in connectivity efforts for the upcoming school year and will provide further details once confirmed. In the meantime, the listed funding sources should be leveraged to build solutions.



Thank You

