Response to Request for Information: “Bridging the Digital Divide for New Jersey’s Students”

Digital Inclusion Practitioners of New Jersey

July 31, 2020

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Introduction

Digital Inclusion Practitioners of New Jersey (DIPNJ) was extremely pleased to hear that considerations for bridging the Digital Divide had been integrated into New Jersey's restart and recovery plan. We are more than excited to see that the state understands the urgency of the issue -- particularly as it pertains to education.

While we understand and appreciate that the scope of NJEDA's RFI entitled "Bridging the Digital Divide for New Jersey's Students" is relatively narrow by design (given time and capital constraints, and the uncertainty caused by the COVID-19 pandemic) the DIPNJ membership believe that tackling the issue of digital inequity is foundational to the success of students statewide -- both during and after the era of COVID-19.

While the vast majority of our response will concentrate on the semi-immediate future, intermittently, we will make note of issues and/or solutions relevant to our long term goal of eliminating digital inequity.

Definitions and Context

The manner in which inequity stemming from technology is discussed varies widely based on the speaker. We believe that in order to properly address these pervasive issues, we must first lay out a series of definitions and explain the philosophical lens through which we view the problem.

In general, DIPNJ uses the definitions favored by the National Digital Inclusion Alliance (NDIA), who are arguably the standard bearers of the digital inclusion industry. NDIA, in publishing definitions, has made explicit qualifying language that is, anecdotally speaking, often ignored. It is DIPNJ's stance that the qualitative emphasises found in NDIA's definitions are absolutely critical to any serious attempts to close the Digital Divide.

> *The NDIA-favored definitions for Digital Inclusion, Digital Equity, and Digital Literacy have been reproduced below:*
>
> **Digital Inclusion**
> Digital Inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs).
>
> **This includes 5 elements:**
> 1. Affordable, robust broadband internet service;
> 2. Internet-enabled devices that meet the needs of the user;
> 3. Access to digital literacy training;
> 4. Quality technical support; and
> 5. Applications and online content designed to enable and encourage self-sufficiency, participation and collaboration.
>
> Digital Inclusion must evolve as technology advances. Digital Inclusion requires intentional strategies and investments to reduce and eliminate historical, institutional and structural barriers to access and use technology.

Digital Equity

Digital Equity is a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy. Digital Equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.

Digital Literacy

NDIA recommends the American Library Association's definition of Digital Literacy via their Digital Literacy Taskforce:

Digital Literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.

A Digitally Literate Person:

- Possesses the variety of skills – technical and cognitive – required to find, understand, evaluate, create, and communicate digital information in a wide variety of formats;
- Is able to use diverse technologies appropriately and effectively to retrieve information, interpret results, and judge the quality of that information;
- Understands the relationship between technology, life-long learning, personal privacy, and stewardship of information;
- Uses these skills and the appropriate technology to communicate and collaborate with peers, colleagues, family, and on occasion, the general public; and
- Uses these skills to actively participate in civic society and contribute to a vibrant, informed, and engaged community.

The Digital Divide

In the spirit of making definitions explicit and specific, we would like to submit an alternative definition to the one provided within the RFI text: "[The Digital Divide is] broadly defined as inequitable distribution and access to modern information and communications technology".

The Digital Divide is the economic, educational, and social inequalities between those who have (a) digital devices; (b) easy and regular online access; and (c) the requisite skills and resources to take full advantage of elements (a) and (b) — and those who do not.

A Brief Introduction to Digital Inequity in Education

> *"Numerous policymakers and advocates have expressed concern that students with less access to certain technologies may fall behind their more digitally connected peers. There is some evidence that teens who have access to a home computer are more likely to graduate from high school when compared with those who don't."* - *Pew Research Center*

COVID-19, and the resulting "shutdowns", have certainly exposed the uneven distribution in access to, and effects of everyday information and communication technologies -- particularly among underserved communities of color.

Especially apparent in the shift away from in-person K-12 education, digital inequity has never been so clear. However, even under "normal" circumstances, students who face a lack of easy, consistent, and reliable access to digital devices and sufficiently powerful internet connections are at a distinct disadvantage to their more well-connected peers. This phenomenon has come to be known as "The Homework Gap."

Community buildings in general, and libraries in particular, have historically been instrumental for mitigating the effects of the Digital Divide. While DIPNJ is hugely supportive of the librarians in our communities, and the spectacular work they have done (and will continue to do) to close the Digital Divide, we must acknowledge that libraries (even when easily accessible and well-equipped) should not be mistaken as a substitute for a home-based high speed internet connection and digital device ownership. Even before the COVID-19 pandemic necessitated the (physical) closure of libraries, dependency on out-of-home internet access forced students (and users in general) to (1) conform personal schedules to business hours, and (2) spend time and energy traveling to and from internet access points.

Smartphone dependence[1] further complicates issues around the Digital Divide -- while access to a mobile internet connection is preferable to no home-based connection at all, the screen size, data caps, reception issues, and lack of full-sized accessories (e.g. keyboard, mouse) create new hurdles for affected students while, under some circumstances, counting them as "connected".

Yet, smartphone dependence is just one of many issues around device and connection sufficiency. Anecdotally speaking, the severe and ubiquitous shortage of affordable devices paired with the relative difficulty of finding affordable, *genuinely* high speed internet service has left many New Jersians to rely on less-than-adequate (i.e. slow, unstable and unreliable) technology to complete important tasks.

Statistics of Note via a 2018 PEW Research Center Article:

- 35% of households with school-aged children and annual income of $30,000/year or less do not have a high-speed internet connection at home[2]. (6% for households with school age children earning $75,000+/year)

- About 17% of teenagers have trouble completing homework assignments due to the Digital Divide

- 25% of black teens report that issues with digital access prevents them from completing homework "at least sometimes"

- While just over a third of teens in general say they "often or sometimes have to do their homework on their cell phone," 45% of teens from households earning less than $30,000/year report "at least sometimes" relying on cell phones for homework

[1] Broadly defined as the condition under which a smartphone is heavily relied on for internet access, even in situations in which it may be inappropriate (e.g. essay writing, resume creation, etc)

[2] According to the Census Bureau, a "broadband" Internet subscription refers to having at least one type of Internet subscription other than a dial-up subscription alone. In the American Community Survey (ACS), it specifically refers to those who said "Yes" to one or more of the following types of subscriptions: Broadband (high speed) such as cable, fiber optic or DSL; cellular data plan for a smartphone or other mobile device; satellite; or fixed wireless. (https://www.census.gov/content/dam/Census/library/publications/2018/acs/ACS-39.pdf)

The work being done in pursuit of safely starting the 2020-2021 academic year should be thought of as the initial step toward eliminating the Homework Gap, and the Digital Divide in general. Given the lifespan of devices, and the rate at which needs change, regular, honest and meaningful revisitation to questions around sufficient technical specifications are critical. Failure to fully contend with the magnitude of the issue leaves large subsections of the New Jersey community in a precarious position -- even under “normal” circumstances.

RFI Response Questions

Description of your role and qualifications related to remote learning and educational technology:

1) **Please provide information on your company, group, government entity, or self and your capacity and qualifications as they relate to remote learning and educational technology.**

   Digital Inclusion Practitioners of New Jersey (DIPNJ) exists to galvanize relationships between organizations and individuals seeking to close the Digital Divide in New Jersey.

   The objective of the group is to bring together digital inclusion practitioners (and those who are otherwise interested) to:

   - Workshop on digital inclusion issues
   - Network with other practitioners and stakeholders
   - Share informational resources across organizations
   - Build a culture of digital inclusion in NJ

   We recognize that many practitioners in the space perform digital literacy or tech support services on an ad hoc basis. While the explicit goals of our organizations may differ greatly, the need for support and services around the digital world is universal. We believe that by sharing insights, strategies, news, leads and upcoming relevant opportunities, we can more efficiently and effectively reach our shared goals.

   Being a current practitioner is not a requirement for membership. DIPNJ is on a mission to create a culture of digital inclusion and equity in New Jersey, and we welcome anyone with a shared vision.

   While DIPNJ is not itself focused on remote learning and educational technology, our members (loosely defined as those who regularly participate in meetings or network projects for the benefit of our communities) come from diverse professional backgrounds and experiences (schools, libraries, non-profits, housing authorities, refugee resettlement, etc). As such, we have a rich and varied breadth of experiences on the topic.

2) **What is your experience with and understanding of New Jersey’s digital divide, both prior to and during the COVID-19 pandemic?**

   Individuals in our network spend everyday interfacing with the issues born out of the Digital Divide, and have deep contextual awareness and consistent experience with it.

   Notable Examples Include:

- Librarians building spaces for individuals to access the internet, and receive ad hoc support on homework and other varied needs (e.g. resume creation, job search assistance, ACA signup)

- Community organizations running digital literacy classes for adult learners that are relevant to the learner's interests (e.g. starting a business; staying connected with loved ones via email, social media and video calls; staying safe online; etc)

- Public Housing Authorities opening and maintaining computer labs on properties, and searching out affordable device and connectivity options for residents (e.g. wireline connections, hotspots, etc.).

- Youth-focused non-profits introducing teens and young adults to the core digital platforms necessary for personal and professional success (e.g. introduction to emerging technologies)

Following Governor Murphy's stay-at-home order in March, most members of our network found that they had to quickly digitize services that had traditionally been in-person. As we navigated this new terrain, members have supported each other by sharing resources, warning others of pitfalls, and celebrating community wins. Two notable member-led DIPNJ network projects include an ongoing attempt to map free wifi locations across the state, and a NJ Community Resource listing. Though woefully insufficient to tackle the problem at hand, the existence of these resources was a critical step to help individuals who have little or no access to technology be able to stay informed and connected to loved ones and the outside world in general.

3) **Which key areas are you/your organization most qualified to address (choose all that apply)?:**

While some members of our network certainly have expertise in device acquisition and affordable internet options, DIPNJ -- both as a collective and as individual members -- primarily focus on "[t]raining/technical assistance/professional development" in our day-to-day roles.

However, because circumventing (or outright solving) device acquisition/connectivity hurdles was a necessary task in order to deliver services to constituents, many members also possess invaluable insight into these matters.

4) **Please also indicate, where applicable, what specific role your company, group, government entity, or self can play in tackling the digital divide.**

DIPNJ is a classic 'community of practice' -- we share information among ourselves and the public, and attempt to provide opportunities for formal and informal training. Given the nature of the organization, and its wide breadth of member experiences and interests, we have the capacity and experience to serve as state program advisers -- introducing parties as appropriate, and helping build a holistic state-wide digital inclusion plan both within and outside of the context of education.

Challenges facing New Jersey around remote learning and educational technology:

5) **What are the biggest challenges/concerns/gaps in the State's current remote learning and educational technology ecosystem?**

There are several major challenges that New Jersey currently faces with respect to the educational technology ecosystem, and digital inclusivity in general. The issues can be grouped into four major categories:

Relatively High Prices of Internet Connections
Despite the existence of several low-cost internet plans (typically require qualification for the National School Lunch Program, Housing Assistance, Medicaid, SNAP, SSI, or other public assistance, thereby building obstacles to access), the state has broadband prices well above the national median for both cable and fiber connections -- $0.83/MBPS vs $0.65/MBPS and $0.55/MBPS vs. $0.48/MBPS respectively.

Inaccurate Common Assumptions
It is not uncommon for DIPNJ members to express frustration with the frequent over-simplifications of the digital inclusion issues.

Examples of basic assumptions [and why they are problematic]:

- *Reliance on self-service portals is sufficient to address digital literacy concerns* [in lieu of individualized, and in-depth tech support programs.]

- *"Simple" tasks are universally easy* [when teaching digital literacy, inexperienced teachers may assume that prerequisite skills are higher than they actually are (right vs left clicks; "Shift" + "1" = "!", etc)]

- *Children are all digital natives, and therefore are able to navigate internet access without adult intervention* (e.g. a young child who can easily navigate smartphone apps likely would not be able to troubleshoot connection issues). [This is problematic because students in households in which digital literacy is low across the board are at a particular disadvantage in digital classrooms]

- *Smartphones and mobile internet are sufficient and appropriate for all online tasks.* [Cell phone limitations (screen size, lack of keyboard, active app limits, etc) make it inefficient for student learning when compared to laptops/computers. The greater size and functionality of a laptop/computer enables learners to access multiple links/programs at once in different windows, collaborate efficiently, and perform competitively]

Good, Reliable and Specific Data

Low quality or non-existent data on the digital divide is a nationwide problem. Historically, misunderstandings of the quirks[3] of datasets have led to confusion or a general lack of urgency around the issue.

As was outlined in the NJEDA's RFI document, efforts to accurately identify and calculate digital access have often resulted in massive underreporting. While some of these issues may stem from the design/implementation of data-gathering efforts, it is likely that a component of the problem is a survey respondent's own understanding[4] of digital needs.

Finally, even if an organization running an audit has an accurate sense of how many people have digital access issues, it is not always easy to identify the nature of those hurdles (e.g. too many family members sharing a single device, vs. multiple people with multiple devices sharing the same connection, resulting in slow speeds).

Service Coordination

Perhaps one of the most hamstringing elements of the status quo is the relative lack of service coordination from a central body. Because digital inclusion issues have historically gone un/underfunded, been considered as an afterthought, or have often not been addressed in any systemic way, those trying to close the digital divide for constituents have (quite reasonably) implemented one-off, siloed solutions. This, in turn, has led to repetition of work, lack of sharing of best practices/iterative improvements, and a general sense of helplessness when confronted with the magnitude of the problem.

In the absence of a centralized statewide coordination apparatus (and a network of more localized (e.g. county or municipal level) equivalents), the response to the COIVID-19 pandemic, as it related to the Digital Divide was, at times, both confusing and severely lacking.

For example, one local housing authority reported that technology promised by the school district did not arrive in a timely manner, resulting in cases where students either had no access, or cases in which siblings were forced to share a single device despite concurrent class sessions. The housing authority responded quickly, relying on its existing relationships with the city library system to secure tablets and wifi hotspots as a temporary solution.

In an ideal (state/municipality/community-wide) system, the social, technological and planning infrastructure would already be in place and could respond more efficiently and effectively to crises. Such networks, which would consist of schools, libraries, landlords, businesses, civic/community organizations, and municipal governments, would be explicitly organized to ensure digital inclusivity.

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[3] E.g. If an ISP offers broadband internet to just one home in a census block, the entire census block is counted as connected. // Internet speed is often reported as what could be delivered rather than what actually is delivered.

[4] E.g. If the question posed is "do you have regular and easy access to the internet?", some may respond "yes" while referring to wifi at work or public wifi down the street. If the same question is reworded as: "do you have access to the internet at home?", a "yes" may include people who have mobile internet at home, but might still face reception or data limit issues.

6) **Despite considerable progress, even prior to the COVID-19 pandemic, many communities throughout New Jersey still face a digital divide. Can you comment on specific obstacles that have impacted or worsened this divide?**

It is the opinion of DIPNJ that many of the obstacles that our communities are facing stem from a society-wide misunderstanding of the concept, importance, and ever-changing nature of digital inclusion (sometimes even amongst practitioners).

The severe cultural underestimation of its complexity has all too often resulted in:

- Extreme underfunding of digitally inclusive programming and sufficiently powerful device/connectivity acquisition;
- Inappropriately simplistic responses to issues (e.g. use of mobile devices in settings in which a laptop/desktop would drastically ease task completion (such as in essay writing);
- Implementation of digital programming without tech support; etc.); and
- The tendency to silo attempts at mollifying the effects of digital inequity (e.g. the concentration of efforts on digital inequity in education vs. digital inequity as it holistically affects the state's residents -- from unemployment insurance and SNAP applications to telehealth and job search).

Ideas for how to close the digital divide and increase technology access and connectivity:

7) **What big ideas do you have to supplement gaps in student access to devices and internet connectivity? What role should the State play? What role might private entities, foundations and/or nonprofit organizations play? Please provide specific examples if possible.**

DIPNJ would wholeheartedly support the creation of an Office of Digital Inclusion -- a state-level body that would partner with other departments and organizations throughout the state to coordinate and execute a holistic effort to close the Digital Divide. We believe that digital inclusion issues are too important, too ubiquitous, and too intersectional[5] to be truly contended with through the status quo approach. At time of writing, DIPNJ has been unable to confirm the existence of such an office, making NJ one of just a handful of states without one.

Given the urgency of digitizing the 2020-2021 school year, the following responsibilities of an Office of Digital Inclusion should still be executed absent the creation of the body. Nevertheless, explicit plans for long term maintenance and eventual migration to a centralized office should be implemented.

- Statewide audit of current digital inclusion status, published annually or biannually
    - Data collection standardization across NJ's many local educational agencies (LEAs) so that less data reconciliation is needed in future audits

[5] Digital inclusion runs across all users and use cases. (e.g. employment, civic participation, housing, transportation, literacy, health, recreation, etc.)

    - Estimate access to home internet broken down by technology, speed, and household size
    - Estimate access to sufficiently powerful digital devices broken down by technology, and household size
    - Defining sufficiency standards for both device and internet speeds according to factors such as household size
    - Note instances of digital redlining
    - Aggregate service area maps by ISP/Telecom companies
    - Avoid pitfalls of FCC broadband access estimates[6]

- Create, Publish and Maintain a Digital Divide Dashboard
    - Display results from statewide digital inclusion census
    - Set benchmarks and monitor progress of state-level interventions (measuring all five elements of digital inclusion)
    - Alert the public of new needs

- Coordinate and Aid in Interdepartmental and Public/Private Partnerships
    - Serve as a thought partner on all things digital inclusion
    - Incentivize and equip local governments to assess and address digital inequity issues locally
    - Run awareness campaigns of:
        - Digital inclusion programming
        - Device drives and corporate/public agency device donations to the local refurbisher network

In addition to the creation of an Office of Digital Inclusion, tapping the state legislature to require publicly owned technology, when possible (i.e. in working condition; not obsolete) be donated to an equipment refurbisher and subsequently sent to community organizations or persons in need. Note: many public bodies lease their digital devices, which is an obstacle that would need to be addressed.

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[6] "The Federal Communications Commission's latest report claims that, as of 2017, 21 million Americans lacked broadband internet. However, FCC commissioner Jessica Rosenworcel told Axios on Monday that figure "radically overstates" how many people actually have reliable connections.

That's likely in part because the FCC's estimate is based on self-reported data from internet service providers, and the agency counts an entire census block as having internet access even if the ISP supplies internet to just one household within that census block." (via Business Insider, 3/12/2020)

8) **What steps should the State take to ensure that remote learning and educational technology equitably serves the needs of students in historically disadvantaged communities?**

A major theme that we have heard from the DIPNJ network is that even in times in which digitally inclusive programming is available, program providers serving historically disadvantaged communities face unique challenges around: (1) community awareness of available services, (2) the wide and varying range of quality of donated, discounted or "affordable" technology, and (3) the bandwidth to act as technical support agents.

The State should take the following measures to mitigate the effects of these common challenges:

Community Awareness of Available Services
The perverse irony of running digital inclusion programs is that the easiest, most ubiquitous and most inexpensive tool for spreading word of the program -- the internet -- is precisely the tool that cannot be utilized. It is therefore prudent to rely on more traditional forms of media and marketing to spread awareness.

- Printed media (mail, public transportation ads, flyers, etc) with detailed information of how to get help with internet access, affordable device acquisition, and tech support/training

- "Tell a Friend" style word of mouth awareness campaigns that are planned deliberately by a central body, and executed by local community partner organizations (shelters, libraries, schools, community centers, places of worship, etc)

- In cases where mass awareness campaigns may not be as successful, dispatching door knocking teams to individually speak to area residents may prove effective. In some cases, hyper-targeted versions of this tactic may be necessary to spread word of challenge-specific services (e.g. households with people with special needs, refugee families with low English fluency, etc).

- Mailings and other non-digital outreach efforts should be tailored to the primary languages of residents in a given area

Wide Range of Device and Connectivity Quality
As the State works to quickly onboard many students into digital class settings, it must be acknowledged and addressed that all devices and connections are not created equal. Possessing less powerful digital devices and slower internet speeds would put affected students at risk of receiving a worse education. Failure to honestly contend with these issues would simply change the way that the Digital Divide looks, while potentially obfuscating the need for further intervention, and allowing the Homework Gap's legacy to continue.

Access to Technical Support
Even with the best connectivity solutions and devices available, it is inevitable that things will eventually break -- wifi connections will drop, computers won't start, devices will slow to a point of unusability. Historically, program providers have addressed these issues on an ad hoc basis, as tech support can be a confusing and cost-prohibitive endeavour for many.

- Phone-based free tech support services should be available state-wide to help with common issues (connecting to wifi, restarting devices, updating devices, resetting passwords, etc)

- Support should be offered in all appropriate languages

- Given the focus of this digital inclusion push, it should be expected that calls will come from both adults (parents and adult learners), and children. Support staff should be trained for both

- When safe to do so, walk-in tech support hours should be held at local community hubs (e.g. libraries, community centers, etc) for issues that are difficult to resolve over the phone

9) **What strategies should the State consider to obtain sufficient hardware and internet access for all students? Are there free or low-cost options that the State should explore, such as donations of goods and/or services directly to school districts?**

The State should seek to spread awareness -- particularly amongst medium-to-large businesses and public entities -- of the deficit of sufficient hardware for students. Any large office setting that is planning to upgrade devices would be an excellent source of technology for refurbishers. The logistical framework has already been built by The National Cristina Foundation and The National Digital Inclusion Alliance.

Additionally, the State should seek to coordinate technology-focused vocational training programs with device donation organizations to fortify New Jersey's refurbishment efforts.

Finally, the State should set minimum requirement standards that are well above current need estimates as to extend the useful life of devices well into the future.

10) **When standard home broadband connections are not available or affordable, what nontraditional broadband models should be considered for New Jersey students and school districts?**

While DIPNJ recognizes and appreciates the urgent need for internet connections, we want to emphasize that models that heavily rely on mobile hotspots and public wifi are not substitutes for *genuinely* high-speed wireline broadband connections at home.

- Mobile hotspot reception can change drastically from variables as simple as a user's geographic location, whether signal obstructions (such as walls) are present, or even poor weather conditions

- Public wifi presents safety risks -- both physically (if a user is required to leave their home during the pandemic; if a user must travel home late at night after using a public wifi access point) and technologically (compromised networks)

- Public wifi often requires a user to either make a purchase (as may be the case in a restaurant), or force the user to work in distracting settings

We believe that the municipal broadband model, such as the one that Chattanooga, TN has developed could play an important role in lowering the cost of internet connections while drastically increasing speeds.

Nevertheless, short term solutions must be implemented in the immediate future to prevent disruption to the 2020-2021 academic year.

Select suggestions include:

- Mobile Hotspot Lending Programs (despite our reservations, mobile hotspots are still likely one of the best short term solutions for quickly addressing lack of internet access)

- Wireless Mesh Networks / Wireless Community Networks - offer a relatively low-cost solution for internet connections while still allowing individuals home access

- Parking Lot WiFi - Near buildings where the wifi signal is strong enough outside, students can access the internet while maintaining social distance from their cars. Installing weatherproof routers/signal boosters outdoors may be necessary to make this option more robust

- School Bus or Bookmobile Wifi - Driving school busses to neighborhoods or areas in which access to the internet is low. Programs such as these tend not to offer 24/7 access -- thereby limiting the hours in which homework or other online activities can occur.

- Funding public wifi hubs, and mandating public buildings/properties (e.g. city halls, recreational centers, parks, etc) offer free public wifi

Questions about training, professional development and technical assistance

11) Regarding training of students, educators and parents in educational technology, what do you see as the most significant issues that need to be addressed through technical assistance or professional development? Please provide specific examples if possible.

DIPNJ believes that the digital inclusion issues that students face are, in almost every (if not every) case, also relevant to educators themselves. For the sake of space, we won't rehash these issues in this section, but instead note that learning and teaching online is a very different experience than in in-person environments.

While some differences between in-person and online education might jump out as obvious topics in need of training (e.g. learning platform-specific training for educators[7] and students), others, such as methods to keep online classes engaging, or strategies to contend with the physical and psychological effects of video calls, may go unnoticed. We submit that shifting to online learning is not a direct analogue for traditional education methods, and may require a complete audit of assumptions upon which programs are built.

[7] Note that this is not a state responsibility; it should be incumbent upon the educational material vendors to provide additional support during the entire lifecycle of product use (rollout, training, updates, re-training, etc.). Nevertheless, state monitoring compliance may be necessary.

Because members of the DIPNJ community have seen situations in which assumptions or oversimplifications of digital inclusion theories have led to troubling real world consequences, we would like to explicitly state that young students and students with learning disabilities cannot, and should not, be expected to set up devices, connect to the internet, and troubleshoot device or connectivity issues.

Ensuring that parents and guardians (particularly those of young students or students with disabilities) have at least basic digital skills will help them stay engaged with their child's education, and provide support when needed. However, this matter is further complicated in situations in which a caregiver must leave the home for work (either taking the student with them, or leaving them at home).

12) **What training and support should be provided to students, teachers, and parents/guardians who are not experienced in remote learning methods or using educational technology, e.g. training on data security and online safety? What should be provided when new remote learning tools are introduced, and what should be provided on an ongoing basis?**

Regardless of a student or teacher's general experience with remote learning methods, app-specific training, *current* online education best-practices seminars, and basic[8] troubleshooting coaching should be offered, and in some cases for educators, required.

Educators in particular must also receive training about digital inclusion, and the Digital Divide. Ensuring that educators understand the full scope of digital inclusion (including accessibility options for people with disabilities) could be instrumental in delivering relevant services and resources to students and families.

Given the ever changing nature of technology, and by extension, online education, these trainings should be offered on a continuous basis. Additionally, a lightweight program should be set up by the State (or other body) to monitor developments in technology and online education best practices, and provide early warning signs of changes to educators.

The relationship with parents and guardians to online education is perhaps less straightforward to address, but, in many cases (e.g. setting up devices for students, particularly young students or students with disabilities), absolutely necessary.

Parents and guardians should be offered[9]:

- Basic digital literacy classes -- typing/input skills, looking up information through the internet, turning on and off devices, connecting to wifi

- Device-specific overviews -- A major element of digital literacy that is often ignored is the fact that unlike traditional literacy, digital skills sometimes have a shelf life. For example, digital skills developed prior to the ubiquity of touch screens (tablets, smartphones, etc) would necessitate training of the fundamentals -- even in instances where tablets are equipped with more-traditional input methods (such as a physical keyboard).

[8] Microphone or speaker issues, slow internet connection issues, etc

[9] These trainings and support systems must be offered in all appropriate languages, and be accessible for persons with disabilities.

- Media literacy and digital safety classes -- determining if information is legitimate, how to spot a phishing scheme, malware protection, setting strong passwords, protecting children against internet predators

- Lessons on setting and managing parental controls

- Printed instructions for common tasks (connecting to wifi, troubleshooting a device that won't power on, how to reach out for technical support, etc)

13) **What professional development should be provided to educators focusing on the pedagogical aspects of remote learning and tailored to the educational technology employed by districts (e.g. strategies for teachers to collaborate and share best practices or peer-to-peer training)?**

Because online learning is relatively new, and technology changes at such a rapid rate, DIPNJ believes that a combination of digital literacy, digital inclusion and app-specific training should be made available to educators, and advertised on a mutually convenient domain (organized by location/webinar format, topic etc).

Additionally, the formation of meetup/peer-to-peer training groups (with support from the State) would help teachers share innovative successful (and failed) approaches with one another and adapt quickly to the rapidly changing landscape of online education.

14) **What strategies should the State consider to ensure that educators are able to utilize the accessibility features and accommodations tools made available through technology-based formats that provide individual support and meet requirements of IEPs and 504 plans?**

In order to ensure that all students have the accessibility features and accommodations needed for successful rollout of online learning, the State, in its digital inclusion awareness efforts (detailed above), should hold both live training sessions throughout the year, as well as establish a website to host a library of video and text-based trainings on accessibility tools.

Such a library should be easily searchable by technical feature (e.g. voice commands, text readers, specialized fonts, etc) as well as disability/qualifying conditions (e.g. ADHD, Dyspraxia, Autism Spectrum Disorder, etc) -- making discovering and learning about new tools easier. The platform should also allow for community suggestions (from educators as well as the public) to ensure that the most current information and best practices are always presented. The site, of course, must adhere to accessibility standards, and include language translation features.

Conclusion

The Digital Divide in general, and the Homework Gap in particular, have been tremendous problems for residents of New Jersey for over two decades. COVID-19, and the resulting precautions taken to address it, has exposed just how precariously situated so many people are. Digital inequality does not just affect our state's students; it lingers in the shadows of just about every topic imaginable -- from healthcare to employment and from social connection to shopping -- the world, quite simply, is a digital space.

The planning and funding efforts undertaken by the state to mollify disparities during the pandemic should not, and cannot, cease if and when COVID-19 winds down. Unless extreme, well-designed and coordinated measures are taken immediately to combat the Digital Divide, as technology progresses, fissures will only become voids.