Tackling the Digital Divide in Higher Education

HURDLES AND OPPORTUNITIES

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The Digital Divide and COVID-19 Impact

According to the **FCC's Eighth Broadband Progress Report**, approximately 19 million Americans – 6% of the total U.S. population – does not have broadband Internet access at home. This lack may be attributed to households' inability to afford home Internet, wireless "dead zones" in specific locales across the nation, or some combination of both.

This inequality extends to the higher education sphere. **A New America survey** in 2020 found that 57% of college students report that accessing reliable high-speed Internet is a challenge for them.

Given the sharp increase in online learning in higher education over the past few decades, however, access to high-speed Internet has become a necessity for students' success – an inequity that leaves disconnected students increasingly at a disadvantage in comparison with their peers.

The outbreak of the COVID-19 pandemic in March 2020, causing at least **1,100 colleges and universities** to shift to fully remote classes within the course of a week, has only exacerbated the inequity among Internet haves and the have-nots.

Millions of disconnected students were suddenly unable to access their classes, coursework, and educational platforms, and with common public WiFi zones like libraries and restaurants closed, many resorted to connecting to buildings' WiFi while sitting outside in their parked cars. And despite the initially optimistic estimates of when a return to in-person instruction could commence, the public health situation worsened and worsened – leading to **70%** of postsecondary schools' decision to offer 100% of their educational opportunities online for the fall 2020 semester.

Faced with burgeoning financial pressures, including job, food, and shelter insecurities, in addition to general pandemic-induced anxieties and uncertainties, many postsecondary students made the decision to delay or forego their educational aspirations. **9.985 million** higher education students in the 18-39 age bracket who were intending to take college course(s) in the fall 2020 semester canceled those plans, leading to a **2.5% decline** in postsecondary enrollment – nearly twice the rate of enrollment decline reported the previous fall.

This discouraging trend did not abate in the spring 2021 semester, with undergraduate enrollment down 4.5% as reported by the **National Student Clearinghouse**. Community colleges have been the most highly affected by COVID, reporting **9.5%** lower enrollment rates than one year ago. Data on high school graduates entering college corroborates this trend, as enrollment in postsecondary education **fell 29%** among graduates of low-income schools and 17% among graduates of higher-income schools.

FIGURE 01. Undergraduate Enrollment Changes by Sector		
	Spring 2020	**Spring 2021**
Public 4yr	-1.1%	-3.3%
Private nonprofit 4yr	0.0%	-2.0%
Private for profit 4yr	-0.9%	3.9%
Public 2yr	-1.3%	-9.5%
Grand Total	-0.9%	-4.5%

"There's no quick turnaround in sight for undergraduate enrollment declines driven by the pandemic," said Doug Shapiro, Executive Director at the National Student Clearinghouse Research Center. "Education institutions, high schools, and policymakers will need to work together to help bring back the learners who are struggling during the pandemic and recession."

Should this divide remain unchecked, it will have dire consequences for those affected – overwhelmingly those in the lowest socioeconomic brackets and/or members of racial and ethnic minorities.

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The Widening Skills Gap

While digital equity concerns are rightfully focused on the welfare of students themselves, the impacts of a digitally disadvantaged workforce on the U.S. economy are equally bleak. Over the past few decades, modern economic and workforce demands have led employers to invest heavily in cloud adoption, digital transformation, and cybersecurity. Despite the thousands of college graduates entering the workforce and the pressure that employers face to hire in these areas, the pool of qualified individuals is too small. Many corporate initiatives are expected to be delayed two years or more because of a lack of skilled workers, and with the pandemic-triggered explosion of e-commerce, the need for skilled individuals is not going anywhere.

This mismatch between workforce demands and the skillsets of college graduates - the skills gap - will not only hurt these individuals' job prospects but will also pose a threat to the ways in which postsecondary institutions themselves traditionally operate. According to one survey, 90% of companies would consider hiring someone without a 4-year college degree, considering certifications or experience as sufficient substitute. If colleges do not adapt to the evolving demands of the workforce, students will be less and less inclined to pursue higher education and will opt for alternative routes with brighter prospects of providing them with a job after graduation (such as Google's recent announcement of its Google Career Certificates, which will prepare individuals for success in a targeted digital field in 6 months and at a miniscule fraction of the price of a traditional degree).

Is there a skills gap in your organization right now?

	2019	2018
Yes	64%	52%
No	27%	36%
Unsure	9%	12%

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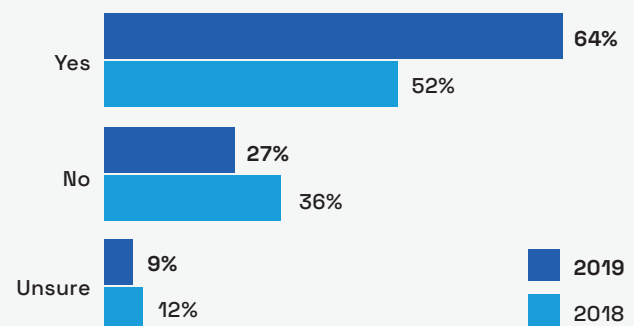
Solutions and Bridging the Divide

As we have seen, the digital divide in higher education is expansive and will have ripple effects well into the future. How can postsecondary institutions begin to address this vast inequity?

There are a variety of solutions – both small- and large-scale – that can be implemented at different levels of administration.

AT THE INSTITUTIONAL LEVEL

Change happens incrementally, but given the urgent nature of this issue, we cannot wait for sweeping reform before beginning to lessen the load on underserved students. The onus is on higher education institutions to make strides towards digital equity among their own student bodies. While it may not be feasible to install a hard-wired Internet connection at the home of every student, starting with simple steps that can be scaled and honed over time is the key to success here.

Let's take a look at some of the major digital equity initiatives that colleges and universities can begin to implement – today.

MAKE DIGITAL EQUITY A PART OF THE ONBOARDING PROCESS.

Make digital equity part of the enrollment process. Even if your school is not prepared to offer off-campus Internet connectivity to all students,

include these conversations in informational and onboarding sessions so that students understand what level of WiFi connectivity they will need to engage with their coursework and what options are available to them (public WiFi zones, campus libraries, discounted or free WiFi hotspot rentals, etc). Assessments of digital need among prospective and/or incoming students can also provide insight into the scope of the inequity among your institution's student body, in turn guiding your next steps towards resolving it.

Ultimately, postsecondary schools may begin adding a technology/connectivity fee to incoming students as a line item on tuition bills, which will not be necessary for all students but which may allow the college or university to provide the means for all students to remain connected.

ROLL OUT A STUDENT CONNECTIVITY PROGRAM.

The most effective way in which to address the needs of a fraction of your students is to onboard with a WiFi connectivity solution that is tailor-made

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for education. Between the range of WiFi hotspots, LTE-embedded devices, and WiFi-equipped vehicles, there are ample ways in which colleges and universities can bring connectivity to your students who need it.

Before selecting a solution for your higher education institution, however, it is important to spend staff time and resources engaging in an evaluation process.

HERE IS WHAT THAT MIGHT LOOK LIKE – AND SOME BEST PRACTICES FOR GETTING STARTED.

1. **Evaluate your need:** The first step in onboarding with a successful student connectivity program is to get a pulse on the need among your student body. One way to do this is to run a series of surveys among your students to get a sense of the current need, in which you may garner participation through advertising on your college or university's student information platform or even offering a small incentive to survey respondents. Going forward, it may also serve you to incorporate questions about Internet need as part of the student onboarding process so that you can prepare for how to support incoming classes.

2. **Establish an approach:** Now that you have a sense of the level of need among your students, you can determine what approach your connectivity initiative will take. Do you aim to provide 100% of your students in need with a WiFi hotspot device loan, or will you start with students at the highest level of financial need and working your way down from there? Will you explore LTE-embedded devices, which can solve both issues of both device access and WiFi connectivity? Will you require additional resources, such as late-night library staff, in order to provide these services to students? These are considerations to explore together as a staff so that you can lay the foundations for your program.

3. **Create a plan:** This is the point when things really start rolling. At this stage, you will outline the specifics of your new connectivity initiative – who it will serve, what the solution will consist of, and when/where/how it will be offered. You

will want to enlist staff support as needed and work to identify any vendors with whom you will need to engage in order to get your program up and running (a connectivity solution provider like Kajeet, IT staff, etc).

4. **Create budget and identify funding:** Any effective tech initiative will require dedicated funds. Draw up a budget and gain the necessary approvals. As you consider technology vendors, consider the solutions that enable you to easily track and report on the initiative's ROI – such as the Kajeet Sentinel® platform. Lastly, note that there are a wealth of federal and state funding opportunities available to support technology initiatives in higher education – check out the Department of Education's HEERF I and HEERF II webpages, as well as this recent funding webinar featuring the U.S. Department of Education, the State of Connecticut, and CoSN. We will discuss funding in more depth below.

5. **Analyze and adjust:** Now that you have rolled out your plan, it is crucial to analyze the results you are seeing – is the initiative meeting the need as intended? Are there any gaps? How are target students performing? Where are opportunities for quick improvements? You may choose to run an internal audit of your program after a specified time period, and/or survey students to capture their feedback and suggestions for improvement. Remaining curious will help immensely as you seek to fine-tune and expand your program to better support students into the future.

A wireless solutions provider like Kajeet can make it easy and fast for you to equip your students with high-speed WiFi connectivity – all without the administration headaches or surprise monthly overage charges. Kajeet SmartSpot™ devices are personal WiFi hotpots that run on any of the major North American wireless carriers, making them ideal for the lifestyle of busy college students. With data and device management capabilities and detailed, real-time insights into student usage and content reporting provided by the cloud-based Kajeet Sentinel® platform, it has never been easier for administers to report on ROI. Dedicated lifetime account management and Tier-1 support help keep your program on track and optimized. Many postsecondary institutions loan Kajeet SmartSpot

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devices to students in need, and even utilize the Kajeet SmartBus™ solution for Maker Buses, rolling libraries and classrooms, and more.

MINIMIZE THE DIGITAL DEMAND OF COURSEWORK.

When it comes to the ways in which educational materials are delivered to students, there are a few simple ways to lessen the load on those with limited data or no Internet – regardless of whether you are supporting them with connectivity solutions.

A FEW ACTIONABLE TIPS ARE BELOW.

1. **Pre-record lectures:** Though there is a valuable interactive element to holding virtual classes synchronously, streaming videos consumes a great deal of data. If a student is attempting to watch live via a subpar WiFi connection, buffering and technical issues are virtually inevitable. You may elect to have your staff record lectures ahead of time and post the video recordings for students to download while connected to WiFi and access on their own time. You may even preserve a sense of community and shared experience through setting your lectures to be made available to students right at normal class meeting time – meaning that students may likely watch the lecture at the same time together, allowing them to discuss with you and one another simultaneously.

2. **Post lecture notes:** In the case that a student is unable to access a live or pre-recorded lecture, the simple act of posting the slide deck used during class and/or any accompanying notes or materials referenced can help catch these students up. Ensuring at least bare minimum class content is readily accessible to Internet-challenged students can have huge impacts in keeping them engaged and on track.

3. **Keep file sizes small:** As virtual learning relies heavily on robust content and file sharing, one way to make coursework accessible to students with limited Internet connectivity is to keep file sizes small whenever possible. Instead of saving videos at HD and 4K quality, save them as MP4

files for easier sharing. Make it a standard to share class materials at no more than 1280 x 720 (720p) resolution. These tweaks are simple and bear no impact on how students digest the material, but they can make a marked difference for those with limited data and/or connectivity.

4. **Use tools with offline features:** While far from ideal, it can be helpful to provide students with tools that they may be able to use in the case that they are unable to access any WiFi connection. Google tools, like Chromebooks and the G-Suite, enable students to download materials they need while connected to WiFi and then resume their work offline once they return home.

5. **Shift data allocations:** If you have supported your students with fully managed WiFi hotspot devices from Kajeet, you have the option to share all program data across devices through the **Sentinel®** platform. Monitoring student usage allows you identify low data users and shift some of that extra data to students who use their hotspots heavily.

We hope some of these tips may help you as you work to make education as accessible as possible for your students.

At the Organizational Level

**PARTNER WITH ORGANIZATIONS WHO ARE WORKING TO MAKE
HIGHER EDUCATION MORE ACCESSIBLE FOR STUDENTS.**

There is a rich cast of community-based and nonprofit organizations at the local, state, and national levels who exist to bridge the digital divide in higher education and support underprivileged students.

Below are some of the leading national organizations in this space, but there are undoubtedly similar groups in your state or region. Use this list to learn more about these nonprofit organizations and see if your postsecondary institution may be able to partner with them.

- **EDUCAUSE** works to advance higher education through the use of information technology, equipping communities with the knowledge, resources, and community-building opportunities needed to help shape strategic IT decisions at every level in higher education.

- **NASPA** works to fulfill the promise of higher education through exceptional professional development, research, advocacy for inclusive and equitable practices and communities, and nurturing networks and pipelines to mentor, rejuvenate, and support.

- **National Association of College and University Business Officers (NACUBO)** works to advance the economic vitality, business practices, and support of higher education institutions in pursuit of their missions.

- The **State Educational Technology Directors Association (SETDA)** builds and increases the capacity of state and national leaders to improve education through policy and practice.

- The **Schools, Health & Libraries Broadband (SHLB) Coalition** strives to close the digital divide by promoting high-quality broadband for anchor institutions and their communities.

- **The Education Trust** works to close opportunity gaps that disproportionately affect students of color and students from low-income families, supporting efforts that expand excellence and equity in K-12 and higher education.

- **Achieving the Dream** works to ensure and preserve access to higher education and success for all students, particularly students of color, low-income students, and other historically underrepresented student populations.

- The **National Collaborative for Digital Equity** supports sustained efforts to eliminate the digital divide as a barrier to economic and educational opportunity.

Many of these organizations offer opportunities for membership, support in advocacy efforts, and participation in community events. Visit their websites to learn more.

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At the Governmental Level

The support of state and federal governments is necessary for lasting changes to occur. There are a variety of state and federal governmental funds and initiatives directed towards bridging the digital divide in higher education, a few of which we touch on below.

FEDERAL COVID-19 RELIEF FUNDING

This heightened demand for education technology solutions in the past year has led the federal government to release a series of relief funds to support higher education, many of which can be used towards student connectivity solutions like those offered by Kajeet.

Relief funding began with the passing of the Coronavirus Aid, Relief, and Economic Security (CARES) Act in March 2020, which released **$14 billion** towards the support of institutions of higher education (IHEs) via the Office of Postsecondary Education. This legislation is referred to as the **HEER** (Higher Education Emergency Relief) Fund. IHEs may use their awards towards financial aid grants to students, student support initiatives, and a variety of institutional costs, including the technology needed to enable off-campus online learning.

This was followed by the Coronavirus Response and Relief Supplemental Appropriations (CRRSA) Act, passed in December 2020, provided an additional $21.2 billion to the **HEER II fund** in support of public and nonprofit colleges and universities.

Recently, the Consolidated Appropriations Act (CAA) was passed, putting an additional **$22.7 billion** towards the support of IHEs.

The **American Rescue Plan Act**, passed on March 11, 2021, includes $40 billion for higher education **(HEER III)**, 91% of which will flow to public and private nonprofit institutions. Special allocations will be given to Historically Black Colleges and Universities, Hispanic-Serving Institutions (HSIs), and other minority-serving institutions (MSIs). Funds must be dedicated to efforts advancing the equity of students who have been hardest hit by COVID-19.

A forthcoming opportunity is the proposed **Connecting Minority Communities Pilot Program Fund**, which would aim to support Tribal Colleges and Universities (TCUs), Historically Black Colleges and Universities (HBCUs), and other institutions who are serving disadvantaged student bodies.

FCC PROGRAMS

The Federal Communications Commission (FCC) has a variety of programs aimed to support work of digital inclusion, both within a context of higher education as well as the U.S. population as a whole.

- **FCC Emergency Broadband Benefit Program** – $3.2 billion program aiming to help households struggling to pay for Internet service during the pandemic. The initiative will connect eligible households to jobs, critical healthcare services, and virtual classrooms.

- **The Rural Digital Opportunity Fund** – directs over $20 billion to improve broadband connectivity in unserved rural areas.

- **The Digital Opportunity Data Collection** – aims to improve broadband data mapping to better identify coverage gaps.

- **The Broadband Deployment Advisory Committee** – was established to accelerate broadband deployment and reduce and remove regulatory barriers to infrastructure investment.

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Key Takeaways

1. The need for remote and hybrid learning tools in higher education is not going anywhere.

2. If left unchecked, the digital divide will continue to disproportionately impact postsecondary students who come from low-income backgrounds and are members of racial/ethnic minorities.

3. Change begins incrementally – we must start somewhere.

4. Partner with organizations who are already doing this work.

5. Advocate for digital equity within your local, state, and federal governing bodies – and take advantage of the resources that are currently available to support digital equity initiatives.

There is much work to be done before we can say that we have arrived at broadband equality for all students seeking to better themselves through higher education, but together we can take advantage of the available resources, solutions, and funding and direct our efforts towards this critical goal.

Kajeet is your trusted partner in managed wireless student connectivity. If you are interested in learning more about how our affordable, reliable, easy solutions can support your higher ed students, simply reach out and we will be happy to speak with you.

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