FIVE-YEAR EQUITY & ACCESS BRIEF

The 2022–2026 Access Trajectory

Where digital access gaps closed, where they persist, and where they quietly widened

35,783 scans • 5 years • the post-pandemic access story

9.8 → 2.5	7.2x	5.9 → 16.9	94.5 ms
Mobile-carrier score gap (pts)	Mobile download speed growth	Upload speed gap (Mbps)	Median mobile latency in 2026

Executive summary

Between 2022 and 2026, online student populations saw their device-readiness baseline improve along nearly every measurable dimension. Average readiness scores rose from 77.8 to 81.9, low-readiness sessions (under 60/100) fell from 10.3% to 7.2%, and the 2020-era gap between students on mobile carrier networks and students on home broadband narrowed from 9.8 points to 2.5. For the first time in the dataset, median mobile-carrier download speeds now exceed those of home broadband.

The story, for online program leadership, is not that the equity gap has closed. It is that the gap has migrated. Download parity is real. But upload speed, latency, and jitter — the dimensions that matter most for live video, synchronous sessions, oral defenses, and proctored assessment — remain structurally uneven. Mobile-carrier users in 2026 upload at roughly half the rate of broadband users and run 14 milliseconds slower in ping, a gap that has widened in absolute terms over the five-year window.

This brief describes what those five years show, why the pattern matters for the specific equity commitments online programs already hold, and what a current-day readiness scan typically surfaces in this new access environment.

Why isolate 2022–2026

2020 and 2021 were anomalies in the readiness dataset. Scan volume tripled as programs went remote, population composition shifted sharply toward lower-readiness devices, and scores temporarily dropped into the high 60s before recovering. Any multi-year trend that includes those two years reflects a pandemic artifact more than an underlying trajectory.

2022 onward represents something closer to the steady state of the online student population. Volume normalized, scores stabilized, and the structural equity patterns that had been distorted

by pandemic adoption became visible again — this time against a backdrop of rapidly maturing consumer network infrastructure. That five-year window is what this brief analyzes.

The headline: the score gap largely closed

The most visible equity metric in the dataset is the average readiness-score gap between students whose sessions originated on a mobile carrier network (T-Mobile, Verizon Wireless, AT&T Mobility, Sprint) and students on every other connection type. The trajectory is striking.

Year	Mobile-carrier avg score	Other-connection avg score	Gap (points)
2022	68.4	78.2	9.8
2023	72.1	77.7	5.7
2024	73.3	77.8	4.5
2025	77.0	80.1	3.1
2026	79.5	82.0	2.5

A 7.3-point narrowing over five years. At face value, this is the kind of trend that could support a conclusion that the access gap has largely resolved itself — that consumer mobile infrastructure has caught up to the needs of online learners. In one specific dimension (raw download throughput), that is true.

It is not true in the dimensions that matter most for online education delivery.

The hidden reversal: download parity, upload divergence

When the same cohort is examined through median speed tests rather than aggregate readiness scores, a different pattern appears. Median download speed on mobile-carrier connections rose 7.2x over the five-year window — from 26.1 Mbps to 188.3 Mbps. In 2025, mobile-carrier download speed briefly matched the broadband median. By 2026, it exceeded it.

Year	Mobile median download (Mbps)	Other median download (Mbps)	Mobile median upload (Mbps)	Other median upload (Mbps)
2022	26.1	72.6	6.8	12.7
2023	56.7	87.3	10.6	17.7
2024	54.2	103.2	13.5	22.0
2025	135.6	132.4	16.3	30.2

Year	Mobile median download (Mbps)	Other median download (Mbps)	Mobile median upload (Mbps)	Other median upload (Mbps)
2026	188.3	144.9	16.4	33.3

Download speed is the dimension the mobile carriers have competed on and invested in aggressively. Upload speed is not. Over the same five years, the absolute upload gap widened from 5.9 Mbps to 16.9 Mbps. Mobile-carrier users now upload at roughly 49% of the rate of broadband users — the same relative ratio as 2022, on a scale that is now three times larger.

For an online program, this matters because upload is the bandwidth dimension that governs live video presence, screen sharing, submitted video assignments, oral presentation quality in synchronous sessions, and — increasingly — the live-camera monitoring required by proctored exam platforms. An online student on a mobile carrier in 2026 downloads course content faster than the campus did in 2022, but uploads their face to a proctored midterm at the 2022 broadband level.

The quieter persistent gap: latency

Latency — the round-trip delay between student device and server, measured in milliseconds — is the second access dimension that has remained structurally uneven. Unlike download, latency is not something mobile carriers can fix with spectrum investment alone; it is a function of how packets are routed through carrier networks and tends to add 15–30 ms on top of whatever the underlying network is doing.

Year	Mobile median ping (ms)	Other median ping (ms)	Latency gap (ms)
2022	119.8	89.2	30.6
2023	105.9	86.8	19.1
2024	99.9	80.0	19.9
2025	93.4	76.8	16.6
2026	94.5	80.4	14.1

The gap is narrowing, but it has plateaued in the 14–17 ms range. For context: Zoom's documented minimum for glitch-free audio is under 150 ms round-trip, and proctoring platforms start flagging connection instability around 200 ms. A student on a mobile carrier whose baseline ping is 95 ms has roughly 55 ms of headroom before a platform treats their connection as unreliable; a broadband student has 70 ms. That difference does not show up on a readiness score but shows up reliably in who gets kicked out of a live exam.

The low-readiness tail is shrinking — but its composition is changing

A useful counterpoint to the score-gap trajectory is the population of sessions scoring below 60/100 — the threshold below which LMS, SSO, and proctoring failures become materially more likely. That population has fallen steadily over five years.

Year	Scans below 60/100	Share of year's scans	Of those, share on mobile carriers
2022	1,045	10.3%	9.6%
2023	907	10.7%	6.1%
2024	806	10.1%	8.1%
2025	565	7.9%	7.4%
2026	144	7.2%	6.9%

Two observations. First, the low-readiness share has fallen from roughly 1 in 10 sessions to roughly 1 in 14 — a meaningful improvement but still well above zero. Second, the mobile-carrier share of the low-readiness population has stayed between 6% and 10% across all five years. Mobile-carrier students remain overrepresented in the at-risk tail relative to their share of total scans (4.1%), by a factor of roughly 1.7x.

The tail is smaller. The composition of the tail — who ends up in it — has not fundamentally changed.

What this means for online degree programs

For equity and access offices

The traditional framing — "some of our students have worse internet" — is now inaccurate in a way that obscures more than it reveals. Most students, on most connections, have enough download bandwidth for asynchronous coursework. The remaining access gap is concentrated in upload and latency — the dimensions that most directly affect synchronous participation, proctored assessment, and live presence in the virtual classroom.

For institutions whose equity commitments include full participation in live course elements — not just access to recorded material — the relevant measurement has shifted. Headline download-speed statistics understate the problem. Readiness scans that separately surface upload and latency tell a more accurate story.

For online program design

Three design implications follow directly from the 2022–2026 trajectory. First, course designs that rely heavily on live video presence as a participation measure disadvantage a specific and identifiable subset of students — mobile-carrier users, who are disproportionately lower-income, rural, and first-generation. Second, proctoring platforms that flag 'connection instability' to invalidate assessment attempts produce systematic bias against the same subset. Third, asynchronous alternatives and bandwidth-aware proctoring options are no longer edge-case accommodations; they are mainstream access design in a population where 4–5% of students consistently show structural upload and latency disadvantages. A note on the equity framing: analysis of device flag rates across TechReady’s institutional partners shows that the correlation between Pell grant receipt rates and device readiness flag rates is weaker than a simple income hypothesis would predict. Institution type and student profile are more consistent predictors than income alone. Technical college students, adult learners, and career-program students — regardless of Pell status — consistently run older devices longer and are less likely to maintain browser and OS currency. The working adult who bought a laptop four years ago and never updated it is not necessarily low-income; they are simply not monitoring their device in the way

a student with campus IT support nearby might. The equity concern is real: Pell-eligible students at for-profit and career-technical institutions are overrepresented in the high-flag tail, and the consequences of a technical failure fall hardest on students with the least margin to recover. But the device readiness gap is broader than a poverty problem. It is a device-maintenance-behavior problem that affects a wide band of the student population — which strengthens rather than weakens the case for universal pre-enrollment scanning.

For student support operations

The 76% figure from the full nine-year dataset — three-quarters of failed scans involve two or more simultaneous issues — holds in the five-year window. The operational model that assumes each student calling the help desk has one identifiable problem to fix is systematically mismatched to the population it serves. A readiness baseline, run once per cohort, is the cheapest way we are aware of to surface the multi-issue profile of a student before it manifests as three separate help-desk tickets and one unexplained withdrawal.

Five-year summary at a glance

All figures are 2022 → 2026 for the full 35,783-scan population.

Measure	2022	2026	Direction
Average readiness score	77.8	81.9	↑ +4.1 pts
Low-readiness (<60) share of scans	10.3%	7.2%	↓ 3.1 pts
Mobile-carrier vs other score gap	9.8 pts	2.5 pts	↓ 7.3 pts (closing)
Mobile-carrier median download	26.1 Mbps	188.3 Mbps	↑ 7.2x (reached parity)
Median upload gap (other − mobile)	5.9 Mbps	16.9 Mbps	↑ widening
Median latency gap (mobile − other)	30.6 ms	14.1 ms	↓ narrowing, not closed
Mobile-carrier share of all scans	3.6%	4.5%	↑ rising
Mobile-carrier share of at-risk (<60)	9.6%	6.9%	↓ but still ~1.7x overrepresented

Next step

A baseline readiness scan against the 2022–2026 benchmarks in this brief typically takes two to three weeks to deploy and produces a population-level view of (1) the overall score distribution in the current student cohort, (2) the connection-type mix and the local version of the mobile-carrier gap, and (3) the upload/latency profile that most directly affects live course delivery. Most programs run it once, use the baseline to guide the next course-design cycle, and adopt it as an annual instrument.

Book a 20-minute demo: [Calendar link]
Request the full five-year data tables: [Email]

Method: Rollups computed from 2026scans.xlsx, 35,783 scans dated Jan 2022 – Apr 22, 2026. Mobile-carrier classification based on the 'isp' field. 'Other connection' covers all non-mobile-carrier ISPs, including residential broadband, institutional, corporate, and other fixed-line connections. 2026 is a partial year; endpoint reads should be interpreted accordingly.

Companion materials: 2026 Longitudinal Report — Prevalence and Impact.docx (full 9-year analysis); Executive Summary.docx; attrition and revenue one-pagers.