

Barriers to Breakthroughs: Assistive Technology Solutions for Under-Resourced Student Populations

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The Financial Barrier

About 1 in 5 undergraduates report a disability — yet only ~37% disclose it to their college. At Hispanic-Serving and Minority-Serving Institutions and community colleges, disability often overlaps with limited finances, first-generation status, and work and family demands.

The traditional “*recommend-and-purchase*” AT model assumes students or institutions can afford costly commercial software. For under-resourced campuses, that model fails — making AT access an **equity issue, not just a technical one.**

~21%

of undergrads report a disability

~37%

disclose to their college

~60%

first-gen at the presenter’s HSI/MSI

A 5-Strategy Framework

- 1 Free & open-source software**
Low- or no-cost tools that match commercial functionality.

- 2 Built-in OS accessibility**
Features already paid for on every device and platform.

- 3 Streamlined equipment loans**
A simple, sustainable lending system students can rely on.

- 4 Campus partnerships**
Leverage IT, libraries & bulk licensing already on campus.

- 5 In-house alternate formats**
Produce accessible materials with tools you already own.

Commercial AT vs. Free & Built-In Alternatives

Need / Function	Common Commercial Tool	Free or Built-In Alternative	Platform
Screen reader	JAWS (\$\$\$)	NVDA (free, open-source); Narrator, VoiceOver, TalkBack	Win / Mac / iOS / Android
Text-to-speech & reading	Kurzweil 3000, Read&Write (\$\$)	Microsoft Immersive Reader, NaturalReader, Read Aloud	Win / Mac / Web
Speech-to-text (dictation)	Dragon (\$\$)	Voice Typing (Win+H), Apple Dictation, Google Docs voice	Win / Mac / Web
Screen magnification	ZoomText (\$\$)	Windows Magnifier, macOS Zoom, mobile OS magnifiers	Win / Mac / Mobile
Note-taking & audio capture	Genio (\$)	OneNote, Otter.ai (free tier)	All platforms
Mind-mapping & organization	Inspiration (\$)	Freeplane, XMind, Coggle (free tiers)	Win / Mac / Web
OCR & alternate formats	ABBYY FineReader (\$)	Microsoft OneDrive, OneNote OCR, built-in scan tools	Mobile / Win
Dyslexia & reading focus	Specialty overlays (\$)	OpenDyslexic font, Immersive Reader line focus	All platforms

Tool names are examples, not endorsements. Verify current licensing before adoption.

Built-In Accessibility — Already Paid For

Platform	Key built-in tools (no cost)
Windows	Narrator • Magnifier • Voice Typing (Win+H) • Live Captions
macOS	VoiceOver • Zoom • Dictation • Spoken Content
iOS / iPadOS	VoiceOver • Speak Screen • Dictation • Live Captions
Android	TalkBack • Live Transcribe • Select to Speak • Voice Access
ChromeOS	ChromeVox • Select-to-speak • Dictation • Magnifier

The bottom line

Cost-effective AT can match commercial tools when it is matched to student need and paired with good training. Quality access is a matter of strategy — not budget.

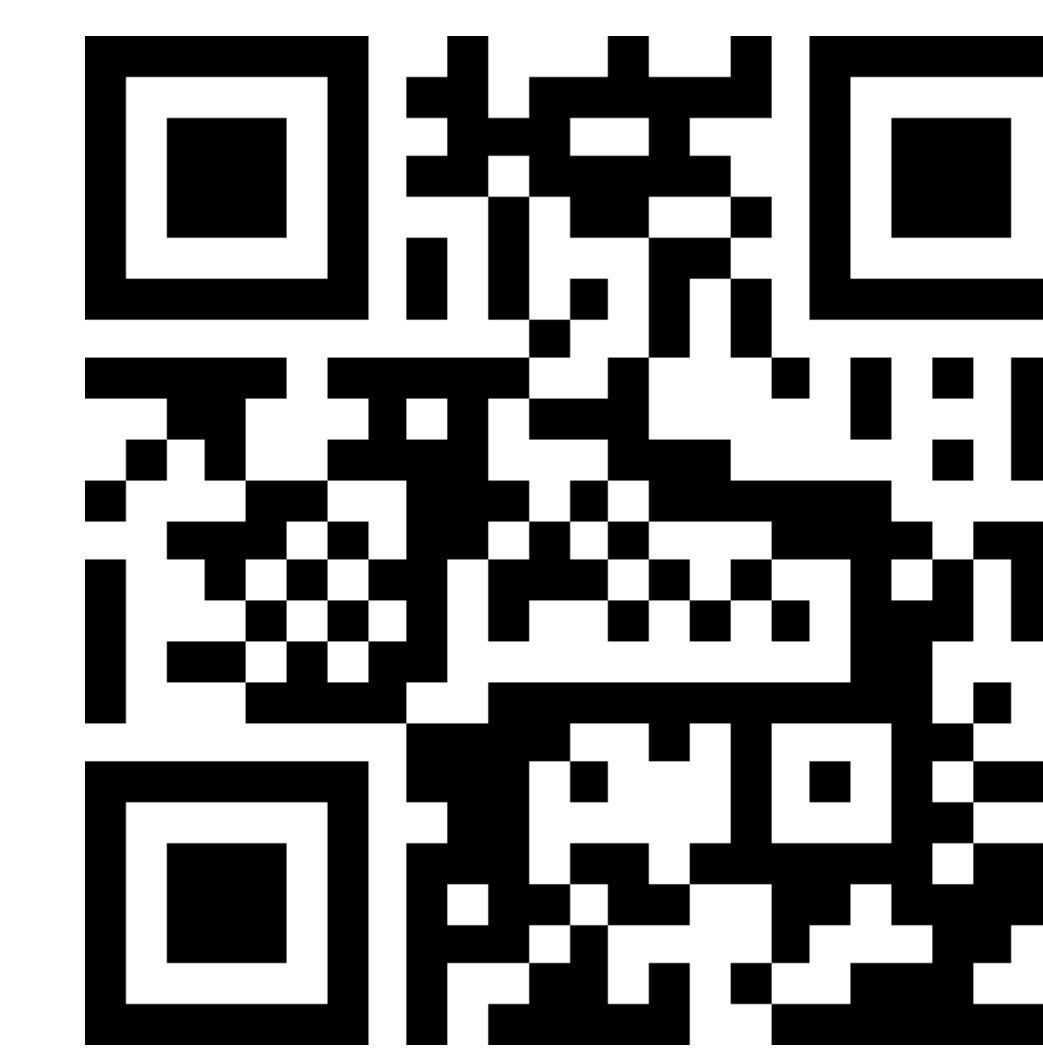
Build a Sustainable Loan Program

- **Prioritize versatile devices**
“Buy once, serve many” — pick equipment that meets multiple needs.
- **Track simply**
A clear check-in/out log plus routine maintenance keeps gear in service.
- **Set a tiered loan policy**
Written agreements and timelines make lending fair and predictable.
- **Reinvest the savings**
Redirect freed budget into student training and support.

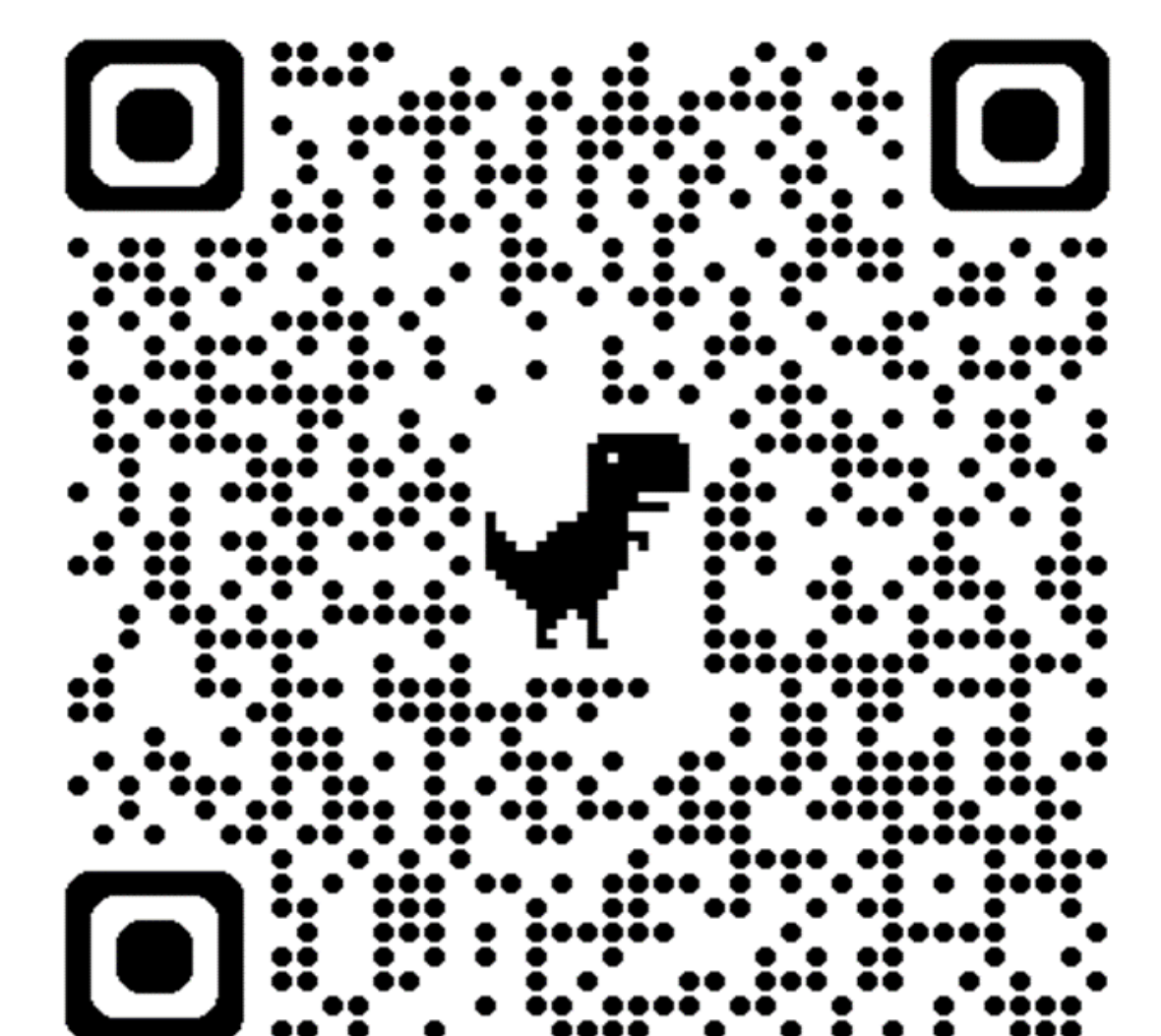
Key Takeaways

- 1 For nearly every commercial AT category, at least three free or low-cost alternatives exist.
- 2 Built-in OS accessibility features are powerful and already paid for.
- 3 A sustainable equipment-loan program is achievable on any budget.

Scan for Tools & Resources



[Free AT tool list & resource guide](#)



[AHEAD session evaluation](#)

References

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