

DSG Part 11: Libraries, Devices and Internet Bandwidth: Library Budgets

Libraries are pretty quick on the trigger with a lot of these ideas and devices; it's a natural fit for those who serve multiple populations, from young to old, rich to poor, and everything in between. We are not early adopters, but not late, either. We're pretty firmly in the middle, and there's nothing wrong with that!

Being a mid-level adopter has advantages and disadvantages, of course. The technology isn't brand new, but new enough to attract interest from patrons. Interest drives budgets, which is vital. It's a matter of convincing library administration to fund the new stuff: Internet and computers.

Also, by this time, there's already been early launches and industry buzz about the technology, so that begins to trickle through the population at large. More commercials play on TV, and more questions come into the library. I believe we've all experienced this to one extent or another. Remember, we are still discussing the time from about 2010 to 2016 or so.

Digital literacy in public libraries EXPLODED here. I had more work than I could handle and was well on my way to teaching thousands of library patrons. This, it appears upon looking back, was a bit of a Golden Age: ideas abounded and the future appeared almost limitless. Smartphones and tablets matured, and even the steadfast mouse (which came about in 1983 and seemed would never really be replaced) was falling out of favor to touchscreen technology. I met more people who had only used touchscreen devices, never a mouse. "Click" was "weird" terminology, right up there with "rotary phone." People understood what you meant, but many had never used one.

Then, the really interesting thing happened: Libraries found they didn't have to buy the devices, but they could be Internet providers for their patrons. Stationary hotspots, if you will. Little did we know exactly how important this service would become.

At this point, we could schedule classes at our local libraries and get together with our patrons. It was, and still is, the best way to learn! Teaching technology in-person and allowing students to use their own devices was fantastic, and not only did I enjoy teaching in this manner, the students liked it, too. It worked very well.

Social media usage ramped up, as did texting. Standalone GPS devices fell out of favor, because smartphones could fill that need. Cameras were in everyone's pocket, with the ability to record video, too. All of this usage, but especially videos, required more Internet bandwidth.

In 2015, the Federal Communications Commission (FCC) changed "broadband" from 4Mbps download speed and 1Mbps upload to 25/3. Remember, download speed should always be significantly faster than upload speed, because when we use the Internet, we are streaming content "down" from the "cloud" (server) onto our computers. When we share information, like pictures or videos, we are streaming content "up" to the "cloud" or server. If, in 2015, a patron used an Internet connection with a speed of 4Mbps and they were trying to watch a video, or, even worse, shared that connection with another person, then major buffering would likely occur. As an example, I spoke to a patron about her new speaker system connected to her computer. She liked to watch

cooking shows on the computer and could not figure out why the speaker was cutting in and out. We hooked it up and played a couple of videos there in class, and of course, it never even hitched.

She was upset, but by that time I learned the power of the phrase, "I believe you." Even though we couldn't replicate the problem, she was having it at home. This led to a discussion of where her house was located, the number of family members that lived there, and finally, what her Internet connection was. Of course, I want the speed numbers, but most patrons have absolutely no idea what that is, or even exactly what it means. So, I have to ask questions like, "About how much do you pay for Internet service? Who is your provider?"

Lo and behold, after going around for a bit, she remembered she had a Digital Subscriber Line connection through Verizon. DSL only gets about 1Mbps maximum... on a good day. Also, it turns out that her husband, the only other one in the house, also liked to watch videos! I explained that they were, essentially, driving two big tractor-trailers on an old dirt road. They wanted to fit videos, which are the largest files on a computer system (the tractor trailers), on DSL, which was slow, even in the decade before (an old dirt road).

Her buffering issue would resolve with faster Internet, as seen in class. We had no issues with the videos or the speakers. Case closed!

The last thing I'll say here is this: the lack of follow-up does make this job a bit difficult. I hope she and her husband are happy with their service now!