DSG Part 10: Bandwidth, Devices, and Literacy

How do you explain that a new device connects to something in the air? We are all accustomed to radio, so that is almost no consideration to us any more. Wireless was fantastical in the early 1900's, but now we have wireless for a new generation…. And an old one. Whoo, boy.

I can imagine the conversations that took place around newly-popularized radios around the turn of the century, as well as the early-versus-late technology adopters. Think about it. In the States, around the turn of the 20th century, there were certainly multigenerational households. The Sandwich generation was plain to see! Grandchildren, parents, and grandparents all lived and worked together in many parts of the country. Of course I know this is not true for 100% of the population, but hang with me, here.

Telegraphs had been around for forty or fifty years; wired telegraphs were in use around about 1850, with "wireless telegraphy" being developed right about the same time as radios, about 1890. By the 1920s radios were in their "golden age," with widespread adoption, serial programming, and music broadcasting. By 1934, the majority of households had a radio.

Why am I going on about radios? Well, the Internet developed in much the same way, with similar adoption rates, and it went from wired to wireless, too. It's interesting to look back on this. The blog at Thomas Jefferson University has greater detail, but the symmetry of radio and Internet development is astounding (see: https://tinyurl.com/y3noqhrg). Basically, the idea of the Internet started in the early 1960s and developed into a bit of a golden age - by the early 2000s, the majority of US households had one computer (about 2003, from Statista, https://tinyurl.com/yy2jbng9). And by 2020 it's almost considered strange to *not* own a computer, tablet, smartphone, or other Internet-connected device (also known as IoT or "Internet of Things"). That's about 50 years in the making, same as radio.

Staying firmly in the present now, it became very important to explain things like *bandwidth* and *devices*. It became vital to show people not just what they are, but demonstrate how to use them both. Libraries, as usual, moved into the gap quickly.

Bandwidth, of course, refers to the amount of information the Internet can transmit through a network. Talking to patrons about home networks became a favorite, because it seemed that no one was taking the time to explain these things. People *assumed* a lot of stuff, and we all know how that goes. By being patient and listening to questions, and also trying to keep classes on track (one question quickly turns into ten, no joke) I got better and better at it.

People still don't understand that the monetary value of many devices does relate to their internal value: items with more memory and better processors will indeed cost more. If they are taken care of, they generally last longer, because they are built to process and hold more information - literally.

Public libraries have both secure wired Internet connections on computers that can be used by anyone, and wireless access for personal devices. You might be reading this thinking, "Who needs that?" Let me tell you, patrons have come to me, nearly in tears, because they have a virus or think their identity has been compromised in some way. Being able to confidently recommend our public

library computers that have *old fashioned wired connections* that are virus-free and difficult to hack can be a Godsend to those that need it. I spoke with a patron, just recently, who needed just that to access email and finish creating the accounts she needed to get to the bottom of an issue. She was concerned that her tablet was compromised, and her computer just happened to be out of commission at the same time (ugh!). So, I asked the first and most important question: "Do you have your passwords?" Thankfully, she said she did. Without those, we might still be on the phone, days later!

Though much has changed over the decades, passwords are still in style; they are the "little black dresses" of the computer world: *enduring*. Dress them up or down, make them plain or fancy, and they *work*. They provide our main means of security for our own accounts; the rest of our security lies in the hands of the IT experts. Write them down and keep them safe; you never know when you might need your passwords!

That's all part of the digital literacy training people need, even to this day. We get used to devices that "remember us" and even have applications that can transfer data from an old device to a new one, but we still need *some* passwords. I did this recently, with a phone, and still had to sign into accounts. This is actually comforting to me, as I need to use my brain from time to time!