

Tech Stories: CUNY Students Using Technology

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We are library faculty who undertook a study of the academic culture of undergraduates at CUNY. Our study, the Undergraduate Scholarly Habits Ethnography Project, seeks to understand:

- Where are students doing their academic work?
- Why do they choose those places? How do they make them work?
- What tools do they use or need?

We're especially interested in what students are doing when we *can't* see them – we see them in the classroom, the library, and on campus, but what is it like for them as they do their academic work in other spaces?

We interviewed students and faculty at six CUNY colleges: Borough of Manhattan Community College, Bronx Community College, Brooklyn College, City College, Hunter College, and New York City College of Technology, and used several different methods to gather information:

- 30 student interviews at each college:
 - Photo Surveys
 - Mapping Diaries
 - Retrospective Research Process Interviews
- 10 semi-structured interviews with faculty at each college

(More detailed information about our research protocols are available on our website: <http://ushep.commons.gc.cuny.edu>)

With so many interviews, we have a lot of data. Here are a few examples of students' photos and drawings. We're working on a book and a website to visualize the data from our project, photos and drawings as well as maps and timelines.

Today we're just going to be talking about students' use of technology. Data from the CUNY Student Experience Survey can offer context – here are relevant data points from senior colleges (SC) and community colleges (CC) in 2010 and 2012 (a new survey is underway this semester). One thing to note is that this data and our own data was collected before the widespread adoption of tablet computers (iPads, Android tablets), which we've anecdotally seen more and more students using recently.

There are a few things to point out on this graph. One is the difference in technology ownership between CUNY community college and senior college students, perhaps unsurprisingly. Also note that access to broadband internet at home decreased between 2010 and 2012 for both student populations, while access to the internet via cellphone increased. Finally, while the percentage of students who report no use of the internet off-campus is small, less than 5% for senior colleges and less than 10% for community colleges, it's important to remember that CUNY has 250,000 undergraduates, so this is still a large number of students.

We learned a lot about how students do their academic work in our study, and today we're going to share some of CUNY students' technology stories.

We found that many students used multiple communications technologies/devices for different tasks. This photo was taken by a City Tech student. As you can see she has four devices pictured: a portable game system, a satellite radio, a digital camera, and cellphone with keyboard. Many of us have one device that allows for all of those uses (and more), for example, a smartphone. We saw this “cobbling together” strategy often in the students we met, as they figured out ways to use the technology they had access to for the tasks they needed to accomplish.

We also met students who had smartphones but did not use them to access the internet. This photo was taken by a City College student who used her smartphone for talk and text only, because she didn’t want to pay for an internet plan. She also told us that she used her iPod for internet access in locations where free wifi was available, both on campus and off.

This Bronx CC student had multiple phones for multiple uses, as you can see in the photo in the upper left. She was originally from St. Kitts in the Caribbean, and would ask her family there to top up her internet access on the Blackberry because it was cheaper in St. Kitts than in the U.S. For her other phone she purchased a prepaid plan in monthly increments to talk and text only.

It surprised us to meet two Hunter students who had no cellphone by choice. One had a computer at home, and one did not; both used the computer labs and the kiosks at Hunter to access the internet during the day. They told us that they used email and Google Chat to keep in touch with their friends, and didn’t find their lack of a cellphone to be particularly constraining. One noted that she found it liberating to not be at the beck and call of her friends and family, since they couldn’t text her anytime.

Like many students we spoke with, even those addicted to their phones, these Hunter students noted that they relied heavily on a paper calendar or datebook to keep track of their academic work and manage their time.

This Bronx CC student told us that he uses peer-to-peer filesharing networks to download his course readings from home. He was a mapping student, here’s his map showing his commute via bus from his Bronx home to the college, and a photo taken by a different BCC student of the library computers (note that this is the old library which was in the basement of one of the campus buildings; BCC opened a new, spacious, and beautiful library last year). This student told us that he couldn’t access those books via torrents from the library’s computers, which is why he downloaded them at home. This student was using his technology knowledge to accomplish his academic work, despite knowing that his actions weren’t entirely legal. And of course our students are all too aware of the high price of college textbooks.

Though our data was collected before the widespread use of tablet computers, we did meet a few students who told us about their use of ereaders. This Hunter student used his technology skills to convert PDFs for his courses into a format readable on his Kindle so he could read them on the commute and always have them with him. He also mentioned that he enjoyed reading on his Kindle, that it made him want to read. We also met one BMCC student with a Nook tablet that she used for reading course materials.

While many of the students we met had laptop computers, most told us they did not bring them to campus. Here’s a quote from a City College student who doesn’t bring his laptop to campus, and a photo taken in a library carrel by a Brooklyn College student who does. Weight was the most common reason students didn’t bring their laptops to campus, and some also worried about the risk of theft. Note that some of the college libraries had laptop loan programs for students at the time of our study, and several students reported using them.

These photos were taken by a City College student who commuted from the northern suburbs to college. He also traveled often between his house and his girlfriend's house, as well as to his job in Connecticut. He had a desktop computer at home but no laptop or smartphone, and took this photo of a flash drive as his primary communication device as it let him bring his work with him from place to place.

CUNY students commute an average of 45-60 minutes each way to campus, possibly several days per week, and many of the students we met spoke of wanting to reclaim that commute time for their academic work. Speaking with this City College student was the first time we heard about students writing papers on their smartphones; she lifted her hands to mimic typing on her phone as she shared this with us. Several faculty corroborated this and told us that they received assignments emailed from students with the "sent from my phone" line at the bottom of the email. Students noted that sometimes they read course texts on their phones, too.

Those students who had internet access on their phones also took advantage of them to engage in their academic work at convenient times and locations. This quote is from a BMCC student describing her research process, and the photo of a bed is from a City College student. (We actually have lots of photos of beds as a favorite place for students do their academic work at home.) This student has a computer at home but took advantage of her smartphone for research "just because time seems to be running out."

Most students told us they use their college library, both for resources and as a place to work. But we also talked to students who were public library users, like this Hunter student with multiple library cards from the New York Public Library and Queens Public Library. This is not surprising, as most CUNY students are NYC residents and likely have used public libraries in their neighborhoods or with their schools.

Many students who did have access to a computer at home spoke of a shared computing situation. This photo is from a Bronx CC student who lives with his aunt and cousin, and all three share the single computer. Also note that the computer is in the living room next to the TV and videogame system, this was a very common setup. This particular student had an additional constraint: since the apartment only had one bedroom, he slept in the living room.

As we've seen there are many reasons why CUNY students need to use computer labs on campus, and we heard many stories about frustrations with those spaces. This photo and quote is from BMCC, but we heard similar complaints at most of the colleges, especially those with space-constrained campuses. Students also shared their experiences of tension between use of the computer labs for social vs. academic reasons. Though they were frustrated when they had academic work to do and others were chatting loudly, watching YouTube, etc., they were universally hesitant to ask fellow students to quiet down or cede their computer.

Printing was mentioned often by the students we spoke with; even those who had a printer at home usually wanted to print on campus as they typically had some number of free pages per semester. This is the Hunter Student Resources Center: when this photo was taken printing had been down for two weeks, and it was midterms. Students told us about their experiences with long lines for printing on campus, which was especially frustrating when they were very pressed for time and rushing to get to class. Brooklyn College has had some success with express printing stations in the library's computer labs, which may be something for the other colleges to try.

To conclude, we found that CUNY students are enthusiastic about technology and about using technology in their academic work, though their access and ability varies widely. We also found, as

have other researchers, that the image of the digital native is somewhat of a myth. Students are very good at using the technology they do have access to, but they may struggle with technologies that are new to them, especially if they have not been explicitly taught how best to make use of them.

How can we help? Our campuses – especially those with less physical space and computer/printing access – would do well to find ways to increase access to and experience with technology for these students whenever possible. This can help students focus on their academic work – on being students – and not on the logistics of accessing academic technologies.

Thank you!