

Understanding the Whole Student: CUNY Undergraduates' Lived Experiences

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We'd like to start off with thanks, first to Luke and all of the folks who organized Teach @ CUNY Day for inviting us to speak this morning. We're glad to be here, and we're looking forward to hearing Natalia's talk and to the workshops as well. And before we talk about our research and what we've learned, we wanted to thank everyone who's made this work possible: the students and faculty we interviewed, our terrific research assistants, and our library colleagues.

We are both library faculty here at CUNY -- Maura is the Chief Librarian at City Tech, and Mariana is Head of Information Services at Brooklyn College. We've been doing this research for almost a decade, guided by these research questions: basically how, where, when, and with what tools are CUNY students doing their academic work. Like you, we're interested in how we can help our students be successful in college and after they graduate. As librarians we see students in our libraries, so we're especially interested in what students are doing when we can't see them, and what's keeping away the students who aren't in the library.

This slide is dense, but we wanted to briefly share a few details about our research. In 2009-2011 we did photo surveys, mapping diaries, and retrospective research process interviews with students, as well as faculty interviews, at these 6 CUNY colleges. And in 2015-2016 we did another round of mapping diaries and technology-specific interviews with students, as well as a student and a faculty questionnaire on hybrid/online courses, all in collaboration with our colleague Prof. Jean Amaral at BMCC.

We'll be showing some of the images and quotes from students in other slides, but we just wanted to take a moment to give an example of one of our research protocols, mapping diaries. On the left is a map from a Hunter student from our first round of data collection. You can see that she's drawn her day, from commuting into school, to going to class (including falling asleep in her labor economics class), to going to the library not to study but to visit her boyfriend, who works there, then finishing classes and heading home. And on the right is an aggregate map of one day for the students we interviewed at BMCC (red), Brooklyn College (green), and City Tech (blue) -- this map was created by sending text messages to students throughout one day, then interviewing them to learn more, and then we geocoded their locations. (We used this method because we were working with colleagues at 5 other institutions on this project.)

And what's been most fascinating -- and is the reason we keep doing this work -- is that we've found that our research has given us the answers to questions we didn't even know to ask. We've also been surprised at the broad similarities between students across CUNY. That isn't to say that there aren't differences in the colleges and students who attend them -- CUNY is a large institution with community colleges through graduate schools, and our student population is incredibly diverse. But we've found that much of the time students' strategies and challenges are remarkably consistent between the colleges in our study.

Today we'd like to share some of what we've learned about CUNY students' lived experiences. We'll talk first about where students do their academic work, then about the technology they use for their coursework, and finally about their process for doing research.

Let's start with the locations where students do their academic work.

As we know, the overwhelming majority of CUNY students do not live in college housing, and many of our students -- from traditional-aged through adult -- share their residence with one or more people, most often family members though sometimes friends or roommates. Their living situation has an enormous impact on how students do their academic work. Some students share a bedroom or use a living room as their bedroom. Finding a quiet spot at home that works for studying can be challenging.

The photo on the left is from a Bronx CC student, this is a response to the prompt "a place at home where you study." When we interviewed this student she told us that this is the hallway outside her apartment, and she studies there because it's quiet and away from her younger siblings. She also told us that her neighbors see her there and cheer her on, she said "they admire me, you know, for putting so much hard work into my schoolwork."

The photo on the right is from a Brooklyn College student who uses this small desk in his living room to do his homework. Note that the TV is visible -- we saw lots of photos of spaces with multiple distractions like TVs, videogame systems, etc. visible. When we asked this student about the TV, he responded: "everybody knows that while I'm in the living room and I'm studying, they can't come in and watch T.V."

We also heard about students who preferred to do their schoolwork at home, despite potential distractions. The drawing on the left is from a City College student and depicts some of the attributes about home that many students mentioned: the opportunity to eat

(there is no food allowed in most of our libraries), and the comfort provided by soft seating or, in this case, her bed.

The photo on the right is from a Bronx CC student who had school-aged children and told us that they would all do their schoolwork together at the table, which she found to be a supportive environment for all of them to work they needed to do.

Like all of us, CUNY students are almost all commuters. Data collected by the Student Experience Survey (which is administered every 2 years) reveals that most CUNY students commute between 45-60 minutes each way, and we've also found that in our research.

Here's a map from a BMCC student who lives in Queens, you can see she takes a bus to the subway to get to school, and the reverse to get home – she's on the higher end of commute times as her travel takes about 80 minutes each way.

The students we've interviewed shared many details about their commutes with us. Most try to use at least some of their commute time to do their academic work, as a Bronx CC student drew in his research process interview (and you can see he actually drew himself with three arms for reading, taking notes, and holding onto the bus pole). Beyond course reading, we also heard from students that they write papers and other assignments on their phones on the commute. Some complained about the lack of internet access throughout much of the subway system, and as wifi service propagates throughout the system it may become easier for students to use technology for their work on the subway. We also heard that it's easier for them to work on the commute if they get a seat, which depends on the time of day and where they get on the train. But public transportation is not an ideal work environment, which most students acknowledged.

Given the challenges of studying at home, it's no surprise that many of the students we talked to preferred to study on campus, most often in the library.

We have lots of student photos of study carrels in libraries, which we often think of as a somewhat old-fashioned type of library furniture but which students valued highly for their private, distraction-free space. Students also specifically photographed the quiet study area in several libraries. These are carrels in the quiet area at BMCC on the left and on the top right is Brooklyn College. On the bottom right is City College's science library which is a somewhat out of the way spot -- for the colleges with bigger or multiple libraries we heard from students that they relished finding study spots that were off the beaten path. On the flip side, we also heard (and in many cases continue to hear) from

students about their dismay when it's loud in the library. Our students are often fitting their study time into very busy schedules so it definitely affects them if they are counting on being able to study in the library but can't because it is too loud.

Some of the other features students appreciated when studying in our libraries were natural light – as this photo on the left from Hunter College shows, and the carrel photo from Brooklyn College in the previous slide. And we also have many pictures of books and bookshelves in the stacks. Many students told us that they found value in being surrounded by books while they did their academic work, that the books lent a sense of seriousness and weight that made it easier for them to concentrate. Some also noted that the presence of other students studying around them served a similar purpose (as long as those students weren't talking).

Ultimately we learned that students made intentional choices about when and where to do their work, to the extent that the external constraints they are under allow them to do so. This quote is from a City Tech student, and he describes a bit of the process he went through in figuring out where he does his best work, and his pride in his success.

As we do, our students also use technology for their academic work.

Smartphones are the all-but-universal technology for students. While we did meet students in 2009-2011 who didn't have a smartphone (and a few without a phone at all), every student we interviewed in 2015-2016 had a smartphone. Students appreciate their smartphones and take full advantage of the various features, as this quote from a City Tech student illustrates. Students told us about using the camera to take photos of readings or notes on the whiteboard in class, emailing instructors, and checking various digital platforms required for their academic work from any location, including on the commute.

Slide 20: A phone is not enough

However, we also heard from students that the phone is not enough -- it's just not possible for students to rely solely on a smartphone for their coursework. Some students struggled to view materials and to type or otherwise input data on the small smartphone screen. Many noted that without wifi or data access there were limits to the academic work they could accomplish on their phones. And as this quote from a City Tech student suggests, many websites remain mobile-unfriendly and may not work properly on mobile devices, even to the point of losing students' work.

While the overwhelming majority of our students have smartphones, not every student has a laptop, or access to a computer, printer, or broadband internet off campus. Thus many students do use the computer labs in our libraries and other campus locations, and the Student Experience Survey reported that 78% of CUNY students used computer labs on campus during the Spring 2016 semester.

This finding aligns with our own research (and our observations in our libraries): our computer labs are busy, and students use them heavily. While it's of course impossible to provide enough computers for each CUNY student, it's worth noting that students are often frustrated in their attempts to use computers in campus labs. This photo and quote from a student at BMCC is one of our favorites, and illustrates the tension that many students expressed to us when trying to get their coursework done in a computer lab where other students are not doing academic work. And as this student also mentions, sometimes they need to use software that they don't have access to at home, so they may be required to use campus computer labs to complete their coursework.

We are not living in a paperless age, and students still need printers for their academic work. Most students prefer to read for their courses on paper so they print their reading when needed. They also print their assignments – papers, lab reports, homework, etc. – when faculty require it. Some students have printers at home, many do not, though many students still print on campus even if they have printers at home. Cost is one reason: printers use consumable supplies like ink and paper, and all of the colleges have at least some free printing allocation for students. This photo taken by a student at Hunter College is an apt illustration of a complaint that we heard frequently from students: printing is a persistent pain point. The lines at computer labs to print were occasionally so frustrating to students that they described their entire day around the need to print an assignment as a focal point.

As eager as they are to use technology for their academic work, students also shared their concerns with us about college-provided systems and infrastructure.

Students most often mentioned the challenges they encountered when using Blackboard, and occasionally when using other systems. Blackboard's poor usability was their primary concern; students mentioned the cluttered design and clunky interface which made it challenging for them to find, participate in, and submit assignments. They were also frustrated that Blackboard didn't work well on their phones, and many were unaware that there is a Blackboard app (and when they found out, they were disappointed to learn that it isn't free). Students also complained about planned and unplanned outages that affected their ability to submit their work by the deadlines, and

wished for improvements to Blackboard's availability and reliability, like the City Tech student quoted here.

Students noted that campus wifi could be slow, unreliable, and inaccessible, especially if they were attempting to complete high-bandwidth assignments such as watching a required video or taking a test in Blackboard. This quote is from a City Tech student but we heard similar sentiments at the other colleges as well. Wifi speed and reliability is especially a concern for students who own laptops or tablets, some of whom told us that they had to use wired computers in the computer labs rather than their own devices for certain tasks because the wifi was unreliable.

Technology is critical: as this student from BMCC notes in their wish that the technology they use for their coursework be fast and glitch-free. Students told us about their expectations for technology based on the systems and applications they use in other parts of their lives, and were quick to point out the ways in which their required instructional technologies fell short in usability and functionality. And again, access is still a concern, as many of our students have uneven access to technology off-campus too.

Shifting a bit, now we're going to see and hear from students about what worked for them in a successful research process. In particular we learned a lot about how students do their assignments that require research from the retrospective research process interviews – this drawing is an example. So we asked students to narrate and draw out their process for us. You will recognize many elements here.

The first key for success for students was having a good, appropriate topic they understood and were interested in. It may sound obvious, but for students NOT having a topic really meant they did not know where begin the research process, they could not assess any search results because they had nothing to measure against. Many remembered clearly their sense of relief when they finally landed on a topic that made sense to them.

As well, the most successful students began thinking right away about their topics, considering possibilities, often doing some pre-research. You can see in this drawing here the student drew himself wondering about a topic, brainstorming and doing some pre-research. Which is followed by what he characterized as an 18-day lazy period. When he realizes that his paper is due he loops back for more brainstorming and research. That first brainstorming and research period, early in the process, is characteristic of students who found success in the research and writing process.

And we had an insight about that “lazy period.” All students put off their work -- and they were really all acutely conscious of procrastinating as you can see on the left. Again and again we heard from successful students how if they first did some brainstorming and topic thinking and research, that “lazy period” was more of a fallow period in which ideas simmered. As you can see from the quote, some students were able to articulate this.

So, what did we learn about how students do research?

Students have a lot of experience looking for things on Google, it's what they know best, and it's what they find reliable and easy to use. There's no getting around that and in fact, acknowledging this is helpful! For example they know how to look for background information Wikipedia and how to mine the list of sources in Wikipedia articles. That's a bit of knowledge, a bit of research experience, that translates really well to library research. While some students have good research skills, many students are not familiar with library resources and do need to be introduced to library research and provided with opportunities to gain skill and practice.

Without ever calling it that, students indicated to us how important scaffolding, in which supports are provided as skills develop, was for them to learn and succeed. Many, many students told us about a version of scaffolding in which they had punctuated deadlines along the way such as requirements to hand in a preliminary topic, possibly with keywords, a preliminary annotated bibliography, maybe a library research workshop, an outline, a first draft and so on. To a person they told us they hated having these deadlines during the semester but in hindsight really appreciated them, as this quote shows.

In addition to scaffolding students found a great deal of benefit in feedback. Formal feedback looked like comments on homework and drafts that helped students know if they were headed in the right direction. As well students told us that while they didn't always relish it, they really got a lot out of workshopping their papers and projects in class. The most successful students also found ways to get informal feedback from friends, siblings, parents, at any stage from brainstorming through to a final readthrough.

Just a few final words on support for the research process. Students may or may not be aware of college supports such as the tutoring or writing center, the reference desk at the library, laptop loans, “free” printing, the disability center and so on. As you can see from the top quote here they aren't always getting all the support they need, or feel that they need. Notice in this clip from a student research process drawing, you can see how the student shows the kind of scaffolded support the teacher gave: readings handed out

or suggested, office hours, helping the student develop a manageable outline “three pages to each topic.”

So, what can we do to help our students be successful here at CUNY?

We can ask our students, questions like what their technology access is like, where they find the space and time to do their work, what their prior experience with research assignments is. This doesn't have to look like a large research study – you can ask students to fill out a short questionnaire on the first day of class, or we can ask students to answer a few questions about their experiences in the library. We can't mitigate every factor that affects them – for example, we can't give them broadband internet at home if they don't have it – but knowing more about their experiences can help us help them work around their constraints.

We can also be flexible wherever possible. When we teach, can we accept some assignments electronically rather than requiring students to print them out? In our libraries, can we offer laptop or tablet loans to help accommodate busy times in our computer labs? These are just a few examples – again, knowing more about our individual students can help identify areas for flexibility.

It's also important to advocate for access and support. Even our space-constrained campuses are too big for all faculty, administrators, librarians, and IT staff to know about everything that's going on in all places. IT staff may have increased wifi service but might not know about those out of the way places where wifi doesn't reach (and students wish it did). Faculty may assign a specific reading to students without realizing that the library doesn't have it, or that the library can provide them with free access to a reading that they've asked their students to buy. And we all might not realize that many students, for a range of reasons, will opt not to buy the Blackboard app, even though it's only \$6. The more information we can share, the better we can make the student experience.

As well, you can advocate for students by familiarizing yourself with, and telling your students about, campus supports that are available to them. Every college website should have some information on academic and other student support services.

In fact, our advocacy will be more powerful with collaboration. There are lots of offices on each campus concerned with helping students to be successful, from academic departments to student affairs to tutoring centers to libraries to centers for teaching to instructional technology offices. If you can, reach out to them. We realize this can be challenging, especially for adjunct faculty who for structural reasons may be

disconnected to the campus. Connecting with librarians is a good place to start -- our libraries are open more hours than most other offices on campus, and library faculty are very interested in partnering with faculty and staff on campus toward student success, just ask us how!

Thanks so much for coming today. We have more information about our research on our project website -- <http://ushep.commons.gc.cuny.edu> -- including research protocols that you are welcome to adapt and use, and links to our publications including our book. Please feel free to get in touch with more questions for us, too.