Embedded in Technology Ecosystems: Graduate Students, Mobile Devices, and Academic Workflows

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Embedded in Technology Ecosystems: Graduate Students, Mobile Devices, and Academic Workflows
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Introduction
This qualitative study uncovers how graduate students use multiple devices to support their academic pursuits, including coursework, group projects, and conducting research. Students often own several devices including smartphones, tablets, laptops, and desktop computers and use these devices in complementary ways. Graduate students represent an understudied population, as we found when we reviewed studies that looked at technology and higher education (for example, the EDUCAUSE Center for Analysis and Research [ECAR] reports are on undergraduates). The information we have gathered addresses that knowledge gap.

Our study tells the stories of how students use devices in their academic lives, how they manage their work among several devices, and why they chose the devices they have. Rather than simply counting devices and apps they use frequently for their academic work, this study foregrounds the voices of students to detail their needs, processes, and experiences navigating graduate level work, while explaining how their devices help them to balance school, work, and home life. Building on Henning (2016), the graduate students’ device ecosystems underpin their academic lives.

Methodology
We used Survey Monkey to recruit participants and included questions regarding types of devices owned, activities performed using devices, academic department, and demographic information. We also asked respondents to rank themselves regarding their adoption of new technologies based on a modified version of Rogers’ adopter categories (Sahin 2006). The screening survey was emailed to all currently enrolled Spring 2016 graduate students (N=3,252) (2). From the 265 respondents (8.14% survey response rate), we chose 18 in-depth interview participants with varying degrees of comfort with technology, and various device ecosystems, from across the five schools that comprise our college while also aiming for a mix of age, gender, and ethnic backgrounds.

We conducted in-depth interviews with students from a range of disciplines, with varying degrees of comfort with technology, to get a well-rounded sense of how and why graduate students are using their particular devices. Interviewees were asked questions regarding their device usage, academic tasks, collaboration experiences, and their experiences searching library experiences, and they were given worksheets to complete that collated information about tasks they performed with their devices, and the apps and programs they used regularly.

Emerging themes from interviews

Selected data tables

Conclusion
Graduate students at Brooklyn College are developing idiosyncratic approaches to using multiple devices and applications for academic purposes. The patterns of usage this study identifies show an adaptation in workflows from the traditional ways of approaching coursework and conducting research. Rather than using desktop computers and printouts and managing these physical workflows, students are using a complementary array of devices, including on campus and work computers. Brooklyn College is a commuter school and students often take public transit to campus and their commutes may also be times of academic productivity. Device ecosystems introduce new possibilities for collaborating, reading, and writing, which has implications for library instruction.

Applications to academic librarianship include potentially shifting to teaching students how to manage and migrate content across devices for reading, writing, sharing, note taking, and annotation and effective use of cloud-based services to do so. Furthermore, encouraging students to consider fair use and the emerging ethics surrounding sharing copyrighted material is of concern.

Literature cited


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Brooklyn College Library and Academic IT