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Book Format Preferences of Community College and Four-Year College Students: Results from Two Urban Campuses

By John Carey and Ajatshatru Pathak

Abstract

This study compared the preferences of community college (two-year) and four-year college students at two public institutions with regard to accessing monographs in print or electronic formats. Results from 79 completed surveys indicate some preference for print among both populations, with approximately 52% of study participants preferring print books and 39% preferring e-books. While the popularity of print prevailed across a wide range of demographic groups and fields of study, the researchers also identified specific cohorts of participants who preferred e-books. Librarians at both community and senior colleges can use these findings to help inform collection development decisions.

Keywords

e-books, monographs, collection development, community college students

Author Biographies

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Introduction

The purpose of collection development in academic libraries is to acquire resources that support the research and curricular needs of students and faculty within an institution. However, in addition to selecting the right titles for their collections, librarians must also provide these resources in a manner that will best maximize their usefulness for patrons. According to Shepherd and Arteaga (2014), "[as] e-book collections grow, students will encounter e-books in increasing numbers and may not always have an option to use print books. Thus, in addition to selecting books that are relevant and valuable to students, librarians must also determine the best

format for patrons' needs" (p. 15). Exactly which characteristics might make one format the "best" in this context is a complex question and probably open to debate; however, user satisfaction represents one possible indicator and offers a starting point for examining the issue.

This topic arose from a 2015 study that the authors conducted examining the reference mode preferences of community college and four-year college students at two institutions within the City University of New York (CUNY) system: Hunter College and Queensborough Community College (Carey & Pathak, 2017). While that study primarily sought to assess patrons' attitudes toward different means of seeking reference help from a librarian, the survey instrument also collected data on participants' preferences for print and/or digital formats when accessing books. This paper presents those findings.

Both institutions examined here have extensive library collections and both serve large, diverse user communities. Hunter College is a comprehensive four-year public college with a student population of approximately 23,000, offering bachelor's, master's, and doctoral-level degrees in "more than 170" programs (Hunter College, 2017). Demographically, white students make up the largest single group at Hunter at about 39%, but the current student body is also approximately 26% Asian, 21% Hispanic, and 14% black (CUNY Office of Institutional Research and Assessment, 2017). Queensborough Community College (QCC) is a two-year institution that grants associate degrees and certificates in 12 areas of study (U.S. Dept. of Education, n.d.), with an enrollment of more than 16,000 undergraduate and nearly 10,000 continuing education students (Queensborough Community College, 2016). Located in Queens, NY, arguably "the most diverse county in the United States," the College serves a correspondingly diverse student body (Queensborough Community College, 2016). Hispanic students make up the largest single group at QCC, comprising 29.8% of the student body, although Asian students are very nearly equal in number, at 28.9%; another 25% of QCC students are black, and just over 15% white (CUNY Office of Institutional Research and Assessment, 2017).

As at many institutions, e-books comprise a growing share of the library collections at Hunter and QCC. During the 2017 fiscal year, the Hunter College Libraries held 435,121 physical books in its collections, down from 625,103 titles during fiscal year 2014. From 2014 to 2017, Hunter's electronic titles grew from 270,742 to 498,891 (CUNY Office of Library Services, 2018). Statistics reported from QCC also show a rapid transformation in holdings. In fiscal year 2014, the Queensborough Community College Library held 431,340 titles in print, but by fiscal year 2017 this had shrunk to 113,634; during the same timeframe, electronic titles grew from 259,495 to 525,762 (CUNY Office of Library Services, 2018). This trend toward

electronic holdings indicates an urgent need for librarians to understand patron attitudes toward e-book adoption.

Literature Review

A number of studies have examined the book format preferences of academic library patrons. Many have found a preference for traditional print resources across diverse disciplines and at a wide range of institutions. For example, researchers from Binghamton University surveying the book format preferences of social sciences, arts, and STEM students found that while patrons may be open to trying e-books, "there is still a large percentage of students across disciplines that prefer print" (Cummings, Larrivee, & Vega 2015, p. 5). At California State University at Chico, Shepherd and Arteaga (2014) investigated "e-book preferences and usage" of social work students (p.15). While overall only a slight majority (51%) of respondents preferred print books, more marked preferences emerged among specific cohorts, such as graduate students (53% preference rate), undergraduate students (65% preference rate), and all participants in age groups younger than the 36–40 category (Shepherd & Arteaga, 2014). This trend across ages and academic levels continued in a study focusing on medical students at Tulane University, which found that "a majority of surveyed students and residents, regardless of their point in the medical curriculum, preferred print textbooks" (Pickett 2016, p.194). This suggests that use and awareness of e-books among academic library patrons has not kept pace with the increasing prevalence of digital holdings.

Studies focusing on disciplinary use of e-books have often found limited adoption among varying cohorts of patrons. In a dialogue with focus groups composed of graduate students and faculty in the social sciences, Hoseth and McLure (2012) found that "[w]hile the majority of focus group participants (15 of 19) indicated that they used e-books before, a preference for print books was a recurring theme" (p. 283). Similarly, in a survey of 169 undergraduate engineering students at Universiti Putra, Malaysia, Letchumanan and Tarmizi (2011) found that nearly 64% of the respondents had "rarely" used e-books and only 36% "regularly" used them (p. 519). Other studies have found uptake of e-books among certain types of patrons only. For instance, Wu and Chen (2011) of National Taiwan University explored "graduate students' usage of and attitudes towards e-books" (p. 294) via interviews with 20 graduate students. They found that participants seeking humanities and medical degrees "frequently" used e-books, while those studying social sciences "rarely" did so (Wu & Chen 2011, p. 299).

However, other research calls into question the link between format preferences and disciplinary divisions. As Yuan, Ballegooie, and Robertson (2018) found in a study of e-book usage at the University of Toronto Libraries, a popular subject can

drive high usage in any format, and in fact, "the usage of one format was tied to the usage of the other. If a subject was popular, usage tended to be high for both formats and if unpopular, low for both" (p. 42). This underscores their observation that choosing between print and electronic sources does not have to be a zero-sum competition; rather, "[t]he two formats complement one another in some aspects but . . . their interactions create a unique and dynamic environment that librarians still do not fully understand" (p. 28). Some of this complexity may relate to a format's suitability for a specific purpose. As Tracy (2018) reports, some studies have found that "patterns across disciplines were more similar than different" and that rather, patrons across the curriculum choose a format according to the task at hand— digital for "exploratory or fragmented" reading or "quick dip" reference, and print for "sustained," immersive reading (p. 41). This complicates any effort to predict patrons' format preferences based on academic major.

These studies provide valuable insights into the expressed preferences of academic library users and suggest that a range of factors including awareness, subject matter, and purpose for reading all play a role in choice of format. Most of the existing literature examines the preferences of students at four-year colleges and universities, and the authors found no studies directly comparing their preferences to those of students attending community or two-year colleges. While some studies took into account the age of participants, the authors found no literature addressing the role that other demographic factors such as gender and race or ethnicity might play. The current study seeks to address these gaps.

Aims

The objective of this study was to investigate whether community college (two-year) and four-year college students prefer accessing library books in print or electronically. This paper explores the following research questions:

- RQ 1. What are the book format preferences of community college students?
- RQ 2. What are the book format preferences of four-year college students?
- RQ 3. Which book format do students from different academic disciplines prefer?
- RQ 4. Which book format do undergraduate and graduate students prefer?
- RQ 5. What are the book format preferences of undergraduate freshman, sophomore, junior, and senior students?
- RQ 6. What are the book format preferences of students belonging to different age, gender, and racial/ethnic groups?

Methods

This paper draws its data from a 2017 study of patron reference mode preferences conducted by the authors (Carey & Pathak). For the reference mode study, Carey and Pathak (2017) surveyed Hunter College and Queensborough Community College (QCC) students using a paper-based survey in the summer of 2015 and analyzed data using SPSS. The investigators solicited participants by approaching students face-to-face near the library entrances or in other common areas of the campus. Out of 100 individuals approached by the investigators, 79 agreed to participate in the study; all who agreed to participate completed the survey. These participants received one dollar in consideration of their time. Of the 79 participants, 49 were students at Hunter, 19 were students at QCC, and 11 were affiliated with other institutions but taking summer courses at Hunter or QCC (Carey & Pathak, 2017). While students of differing racial, ethnic and age groups participated in the study, the majority of respondents were female undergraduates pursuing degrees in a range of academic subjects (Carey & Pathak, 2017).

This study used an instrument of 15 questions. The first seven questions gathered information about the participant's institutional affiliation, academic level, year of study, gender, age, race, and academic major. The primary focus of subsequent questions was to assess patrons' choices when obtaining reference assistance, but one question addressed attitudes toward print and electronic book formats. Item 13 on the survey asked respondents the following question: "Do you prefer a) Electronic books, b) Print books, c) Do not know, d) None" (Carey & Pathak, 2017). The instrument concluded with two open-ended questions soliciting suggestions for improvements to library services, but these did not generate any comments relevant to the scope of this paper.

Results

Approximately 52% (n=41) of the study's participants preferred print books while approximately 39% (n=31) preferred e-books. One participant (1.3%) preferred both formats equally. Another participant (1.3%) reported no preference. Three participants indicated that they did not know and two participants declined to answer the question. However, preferences varied among the populations identified in each of the stated research questions. In addition to the text summaries that follow, please see the table below for complete data on responses from each cohort.

Book Format Preferences of Respondents, by Count and Percentage

	Print book	E-book	Both	None	Do not know	Did not answer
All Respondents	41 (51.9%)	31 (39.2%)	1 (1.3%)	1 (1.3%)	3 (3.8%)	2 (2.5%)
Community College (two-year) Students*	10 (53%)	5 (26%)	1 (5.3%)	0	1 (5.3%)	2 (10.5%)
Four-year Students*	25 (51%)	22 (45%)	0	1 (2%)	1 (2%)	0
Preferences by Academic Level						
Undergraduate Students, all	28 (44%)	29 (45%)	1 (1.6%)	1 (1.6%)	3 (4.7%)	2 (3.1%)
Freshman	4 (40%)	4 (40%)	0	1 (10%)	0	1 (10%)
Sophomore	7 (37%)	7 (37%)	1 (5%)	0	3 (16%)	1 (5%)
Junior	4 (31%)	9 (69%)	0	0	0	0
Senior	14 (61%)	9 (39%)	0	0	0	0
Graduate Students	5 (100%)	0	0	0	0	0
Preferences by Field of Study						
Arts and Humanities	3 (50%)	3 (50%)	0	0	0	0
Education	3 (100%)	0	0	0	0	0
Health Sciences	5 (39%)	6 (46%)	1 (7%)	0	0	1 (7%)
Math and Statistics	3 (75%)	0	0	0	0	1 (25%)
Natural Sciences	10 (53%)	8 (42%)	0	1 (5%)	0	0
Social Sciences	10 (42%)	12 (50%)	0	0	2 (8%)	0
Social Work	2 (100%)	0	0	0	0	0
Preferences by Age						
24 and younger	28 (49.1%)	22 (39%)	1 (1.7%)	1 (1.7%)	3 (5%)	2 (3.5%)
25-34	11 (58%)	8 (42%)	0	0	0	0
35-44	1 (100%)	0	0	0	0	0
45-54	0	1 (100%)	0	0	0	0
55-64	1 (100%)	0	0	0	0	0
Preferences by Gender						
Female	27 (54%)	19 (38%)	1 (2%)	0	1 (2%)	2 (4%)
Male	14 (48.3%)	12 (41.4%)	0	1 (3.4%)	2 (6.9%)	0
Preferences by Racial or Ethnic Identification						
Asian	7 (35%)	13 (65%)	0	0	0	0
Black	13 (59%)	7 (32%)	0	0	0	2 (9%)
Hispanic	8 (73%)	3 (27%)	0	0	0	0
Multiracial	2 (67%)	1 (33%)	0	0	0	0
White	7 (44%)	6 (38%)	0	1 (6%)	2 (12%)	0

* The count of two-year and four-year students excludes 11 participants of ambiguous/other status.

RQ 1. What are the book format preferences of community college students?

Nearly 53% (n=10) of community college students who participated in this study indicated a preference for print titles; slightly more than 26% (n=5) favored e-books. One community college student (5.3%) preferred both electronic and print books, and one did not know their preference. Two community college students (10.5%) did not reveal their book format preferences.

RQ 2. What are the book format preferences of four-year college students?

Fifty-one percent (n=25) of four-year college students picked print as their preferred book format, and approximately 45% (n=22) chose e-books. One four-year student (2%) did not know their preferred format, and one student chose neither. None of the four-year college students preferred both formats equally.

RQ 3. Which book format do students from different academic disciplines prefer?

The study identified the following academic disciplines in which participants were pursuing degrees: natural sciences; health sciences; social sciences and social work; arts and humanities; education; and mathematics and statistics.

In the natural sciences, slightly more than 42% (n=8) of students preferred e-books but approximately 53% (n=10) favored print. Students pursuing degrees in subjects related to the health sciences cited a slight preference for e-books, with more than 46% (n=6) preferring digital format compared with about 39% (n=5) who favored print. Among participants in STEM fields, only the mathematics and statistics majors expressed zero preference for e-books: three of these respondents (75%) chose print as their preferred format and the other one (25%) did not answer.

Students in the social sciences displayed a greater preference for e-books than did students in the natural or health sciences—less than 42% (n= 10) of social sciences participants chose print as their preferred format while 50% (n=12) chose electronic. Students identifying as arts and humanities majors divided evenly between the two formats, with 50% (n=3) favoring e-books with the same number of students citing a preference for print. All education majors (n=3) and all participants pursuing a degree in social work (n=2) indicated a preference for print.

RQ 4. Which book format do undergraduate and graduate students prefer?

The study collected data on preference by undergraduate or graduate status. Undergraduate participants divided evenly, with slightly more than 45% (n=29) preferring e-books and just under 44% (n=28) preferring print. Three undergraduate students (4.7%) said they did not know their preference and two (3.1%) did not answer the question. One undergraduate (1.6%) preferred both electronic and print titles and one (1.6%) claimed to have no preference. All graduate students (n=5, 100%) selected print as their favored format.

RQ 5. What are the book format preferences of undergraduate freshman, sophomore, junior, and senior students?

The survey also attempted to capture preferences according to academic level. Freshman and sophomore respondents both divided evenly between print and electronic. Four freshman students (40%) preferred e-books while another four (40%) favored print. Similarly split, 37% (n=7) of sophomores stated a preference for print while an equal number indicated a preference for e-books. Junior students alone displayed a strong preference for e-books, with 69% (n=9) indicating that they preferred digital titles and only 31% (n=4) print. Responses from seniors were nearly the inverse of responses from juniors, with only 39% (n=9) selecting e-books and roughly 61% (n=14) preferring print.

RQ 6. What are the book format preferences of students belonging to different age, gender, and racial/ethnic groups?

The study analyzed participants' format preferences in light of the demographic factors of age, gender, and racial or ethnic identification. Overall, male and female respondents expressed similar levels of interest in each format but favored print by at least a small margin. Among male respondents, 48.3% (n=14) cited a preference for print while 41.4% (n=12) chose e-books; among female respondents, these numbers were 54% (n=27) in favor of print and 38% (n=19) e-book. Two male participants (6.9%) said they did not know their preference, while one female respondent (2%) preferred both formats and two others (4%) did not answer the question.

With regard to age, the study divided participants into five groups, which showed a diverse range of responses. Approximately 39% (n=22) of study participants below 24 years of age preferred e-books while 49.1% (n=28) of these subjects preferred print. In the 25–34 age group, 42% (n=8) cited a preference for e-books while 58% (n=11) favored print books. Print emerged as the preferred book format of the one participant (100%, n=1) representing the 35–44 age group; conversely, the sole participant (n=1, 100%) belonging to the 45–54 age group expressed a preference for electronic format. Print was the preferred book format of one participant (n=1, 100%) belonging to the 55–64 age group.

In the area of race, participants in this study identified as white, black, Hispanic, Asian, and multiracial. While none of these groups were monolithic in their responses, all except one expressed a preference for print. For instance, print emerged as the preferred format for 44% (n=7) of white, 59% (n=13) of black, 73% (n=8) of Hispanic, and 67% (n=2) of multiracial participants. Only participants who identified as Asian expressed a preference for e-books, with 65% (n=13) citing electronic and only 35% (n=7) selecting print as their preferred format. Among other groups, e-books were preferred by about 38% (n=6) of white, 32% (n=7) of black, 27% (n=3) of Hispanic, and 33% (n=1) of multiracial participants.

Discussion and Limitations

While any conclusions drawn from these results remain limited by the study's modest sample size, the responses collected here do reveal several trends. First, the data demonstrate an ongoing interest in print materials across almost all demographic groups, even across cohorts that otherwise differ significantly. Clear divisions by academic discipline emerge among these participants; for instance, humanities students and health sciences students showed comparable levels of interest in e-books. Education and social work students favored print, but so did students studying natural sciences and math or statistics; health sciences

and social sciences students both preferred e-books. Again, a larger sample size might have revealed greater distinctions among the respondents; but the results obtained here align with the conclusion noted by Carroll et al (2016), who found that "non-STEM respondents showed a slight inclination for print, while STEM respondents showed a slight inclination for electronic. However, neither result was definitive enough to generate a clear guide for purchasing these formats" (p. 149). It may be that students in STEM fields (which emphasize peer-reviewed journal articles over book-length resources) develop a high degree of comfort accessing online journals which carries over to their book use as well.

This study has a number of limitations. First, the data derive from a small, non-probability sample, and response biases present in the analyzed dataset may have weakened the generalizability of the study's findings. The participants in this sample may not be representative of all library patrons—the investigators conducted the survey during the summer, when fewer students are on campus. It is possible that this cohort differs in some salient characteristics relative to students who attend during spring and fall semesters. For instance, the investigators retroactively discovered that while full-time students greatly outnumber part-time students during the spring and fall semesters, part-time students are overrepresented in the summer cohort (Carey & Pathak, 2017, p. 67). Because the instrument used in the survey did not solicit information about full- or part-time status, the exact composition of the group studied here remains unknown.

In addition, the survey instrument used to collect this data may not have provided sufficient context for all respondents to provide an informed answer. Many types of book-length resources may be available electronically, whether textbooks, encyclopedias or other reference works, edited volumes, or scholarly monographs. Yet the survey question about e-books did not define these publication types or describe any parameters for e-book usage, such as in-depth reading versus skimming or scanning for specific information, use of the entire work versus a single chapter or passage, or other behaviors. Without such context, respondents with less experience accessing the library's collections may have found it difficult to form a meaningful opinion.

Moreover, this study did not address potential barriers to e-book use among patrons or the role of marketing and promotion on behalf of the library. In the current study, certain cohorts of participants either expressed a preference for digital titles or divided evenly between the two formats. Therefore, if patrons are not using e-books from our collections, we must ask why. Potential barriers could include pedagogic issues such as academic librarians failing to equip patrons to discover and access e-books in the library's catalog, or material concerns such as likelihood of patrons to own an e-reader, smartphone, or other device that would facilitate e-book

use. It could also be that library users find the platforms that publishers use to host e-book content unfriendly or difficult to master. Publishers' restrictions due to digital rights management can also interfere with features that would otherwise appeal to users, such as ease of access and storage for offline viewing. As Slater (2010) found in a review of literature on the topic, "legitimate attempts to protect intellectual property frustrate users who are already dealing with [a] complex web of links and instructions to even find an e-book" (p. 313). Without further research, it is difficult to determine if the preferences expressed in this study reflect a true commitment to print resources or if the results indicate the need for librarians to do more to promote and educate patrons in the use of electronic titles.

Conclusion and Future Research

Even with the limitations noted above, the findings of this study provide opportunities for future research on this topic. In terms of methodology, prospective researchers could explore academic library patrons' book format preferences more in-depth by utilizing qualitative research methods such as interviewing. Future research could also address patron characteristics not examined here; for instance, a large randomized study could compare the book format preferences of students enrolled in online courses against those of students attending face-to-face, or examine the effect of on-campus versus off-campus housing. Comparing the preferences of international students with those of domestic students represents another potential area of study.

The authors hope that the findings reported in this paper will prove valuable to collection development librarians and others working in academic libraries. The data collected in this study suggest that e-book adoption rates among patrons are not keeping pace with the rapid growth in digital titles at these institutions. If academic libraries are to rely increasingly on digital holdings, effective collection management will require librarians to inquire not only into the choices that patrons make when accessing the collection but also to seek to understand the motivations behind these choices. Addressing any real or perceived barriers through outreach and education will help maximize the use of digital titles and, over time, may favorably dispose patrons toward e-book adoption.

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