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What Students Want

Electronic v. Print Books in the Academic Library

Attending college can be a significant milestone in many young adults' lives. For some, it is a well-worn path walked by multiple generations, while for others, it is a new journey marked by an unfamiliarity with the expectations of the collegiate environment. First-generation college students do not have generations of experience and knowledge to rely on or to consult regarding academia's hidden policies and procedures. As a result, understanding aspects of college life that reinforce first-generation students' efforts to succeed throughout their college journey is essential for libraries. Today's university administration tends to assume that first-generation students are digital natives who prefer electronic resources since they have grown up surrounded by this technology.[1] On the other hand, libraries have witnessed first-generation students frustrated by current technology despite their digital native status, adding another barrier to success.

Besides being alert to how engaged students may be with technology, libraries are also fundamentally aware that print books and electronic books lead to different outcomes depending on the reading styles of students.[2] Print books have been linked to deeper focus and concentration, better integration of concepts, and easier memorization. In contrast, electronic books are linked to quick decision-making, rapid pattern recognition, instant gratification, and often impatience when results are not immediate.[3] The choice of reading material often aligns with the student's desired reading style to achieve the optimum outcome.

Perhaps more than ever, libraries should know students' preferences for reading materials when preparing for classroom assignments and exams. This is especially important when university administrations are unilaterally determining to close brick-and-mortar libraries for virtual versions with little input from those affected.[4] Fortunately, recent examples of such efforts did not materialize after community objections. A focus on digital resources requires careful consideration of library policies by policymakers to ensure that they reflect the university's public mission and ensure the success of all students. At Rowan University, one such endeavor was to embark on this study to determine if our policies actually reflected the ways in which the student body used the library collection.

About the Institution

Rowan University is a four-year public research institution in the northeastern United States. It has a rapidly growing undergraduate student population, with over one-third identifying

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as members of underrepresented groups, plus 5,711 self-identified first-generation students. Like many research institutions, it boasts a multi-library system, with two medical libraries catering mainly to graduate students and a central library focusing primarily on the undergraduate student population. With such a large body of first-generation students, the study team, which consisted of a librarian doctoral student and their advisor, was interested in learning how the library's current electronic primary collection policy might affect this population, as this policy requires the purchase of electronic books first, with rare exceptions for print book purchasing.

Rowan University has been an e-primary institution since 2015 to address many issues, including lack of space. Rowan University Library's collection development policy was adapted to reflect this need and requires that the library purchase materials in an electronic format first, with exceptions for curricular and format needs. In practice, this policy has led to frustration and annoyance with the library for students who cannot access materials in their preferred format.

Investigating Library Policy

In the fall of 2022, the study team designed a mixed methods study to explore the effectiveness of the electronic primary policy and received IRB approval. Data were collected in two parallel phases and used an intrinsic case study design to focus on first-generation college students at Rowan University.[5] The study aimed to better understand this population's behaviors and preferences toward print or electronic books in the Rowan University Libraries' collection. The quantitative phase focused on the Academic Reading Questionnaire,[6] which was chosen because Likert items are designed to measure an individual's attitudes toward a particular topic, and attitudes displayed by individuals indicate a positive behavioral belief.[7] Analyzing these results informed the study team of behavioral beliefs toward print or electronic books. The survey, distributed twice during the fall semester using stratified random sampling methods, included continuing-generation college students, soliciting 318 responses. The data, collected via Rowan University's instance of Qualtrics, were downloaded, then analyzed using SPSS software. All personal information was kept in a separate anonymized and password-protected file. Survey questions were then analyzed using contingency tables.

From the survey, 80 indicated interest, but 19 first-generation college students self-identified to be interviewed. The survey team then undertook a qualitative phase with these students to evaluate their engagement with library resources considering their unique collegiate needs and analyzed using Stake's categorical aggregation technique.[8] During the interviews, participants could highlight and expand upon their preferences for using the print or electronic book collection in the Rowan University Libraries. All data were collected during the 2021–2022 academic year.

What We Learned

Through this mixed-methods study, the team discovered that both continuing-generation and first-generation students primarily prefer print books for course materials. In fact, kinesthetic learning was a prominent component of student preferences and relates to reading style through skimming or detailed reading as used by the student. Specific survey or interview questions did not cover this attribute. It first appeared in the survey's free text area but

was fully uncovered during the study team's interviews. During these interviews with first-generation college students, they frequently mentioned their need to touch course materials. Below, three key aspects of participants' kinesthetic learning experience are explored.

Kinesthetic Learning
While the need to touch course materials was not covered in the survey, several participants did mention this in the survey's open-text field. In this section, participants said, "there is something about actually holding the material. It makes me able to comprehend the material better," and "I prefer to annotate and work from a print version. I work best if I can turn the pages myself, and it's easier to keep track of places I need to refer to." One participant simply stated, "I think using the kinesthetic method is good for the student." Again, participants were not queried about kinesthetic learning but about overall preferences for course materials rather than specifics, such as if they preferred to flip pages or scroll screens. Regardless, the need to touch the material was critical in their learning.

Recalling Material
In many cases, touch is related to the ability to recall a fact or reinforce subject matter while studying. Turning the page accentuates the material differently for these first-generation participants than the endlessly scrolling electronic book page. Most participants felt that the tactile experience of holding a book or flipping a page strengthened information retention as they studied. Sabrina stated,

> I like having it in front of me. I like flipping through pages, trying to find texts. It's better for me to focus, and overall, I just like physically having it in front of me that I can hold.

Other participants, like Dave, echoed this sentiment, stating, "I don't retain as much without having the book in front of me. I guess you get the extra tactile feedback." Thus, a direct connection exists between physically holding the text, focusing on the material, and later recalling it, making this a vital aspect of their study habits.

Deeper Engagement
Comparatively, participants felt that electronic books—with their never-ending screens—were too ephemeral in design and made it harder to pinpoint information without taking copious handwritten notes, printing information, or highlighting and annotating those documents. Almost as a group, participants mentioned that they do not read electronic books as deeply as they do print books. For instance, Nazir states,

> I know I'm going to go through it quickly. I'm not going to absorb it and sit down. You know how people say, "Oh, skim over it?" One, I'm not that good at that, but when I'm using digital, it makes me do it.

In fact, direct engagement with the text became an event through which participants nurtured their learning. Nazir mentioned that he preferred printed books so that he "could go in the library. I can sit down, open it. I know I'm going to make an event out of the book. I like to really nurture it and really go through it." Participants who sought that physical

element were better able to reinforce, to nurture their learning through a deeper engagement with the content.

Next Steps

This study made apparent that while undergraduate students work in both print and electronic mediums, it is impossible to predict a common preference from one group of students to the next. Sharing the results of this study with both the library administration and the Provost's office will enable discussions regarding current policies and practices at Rowan University that would allow for reflection surrounding student reading styles and the purchasing requirements that might affect these preferences. Additionally, engaging with the first-generation task force on campus could help construct more informed policies surrounding library materials and reading preferences, thus removing hidden barriers from this population. Finally, an expanded version of the study that seeks to understand how all underrepresented groups use library materials would lead to better policies and practices overall for the Rowan University Libraries.

Conclusion

Attending college for first-generation students is challenging, with many obstacles and barriers. University administrations and libraries often assume first-generation students are digital natives and have created policies that, in a significant part, do not consider how these students ultimately engage with library materials.

The work conducted in this study reinforced that first-generation students choose their reading material preference based on classroom assignments and exams. Libraries such as Rowan University that have an electronic resource–first policy are creating a disservice to not just their first-generation student population but, as this study indicated, other student populations on campus. From the administrative point of view, it appears beneficial to the student population to make resources widely available through electronic resource packages, which can be accessed from multiple locations and by the maximum number of individuals. However, participants interviewed and surveyed have strongly indicated that this does not adequately replace the print format for study and focus. It is also cheaper for the administration to make these resources available electronically because they no longer need to provide square footage for their print counterpart. Conversely, electronic materials are also typically purchased in packages (e.g., "Big Deals)" that, while often negotiated to the best of the library's ability, still cost thousands more than the average print book version.

Rowan University Libraries and libraries of a similar class—for example, public research institutions catering to first-generation student populations—must continue providing greater access to print books for this population and other student populations with similar preferences and needs despite the electronic-first policies. As university administrations continue to push for an electronic-only library, it is essential to provide hard data from studies such as this to indicate the continued need for print collections. Libraries need to continue to advocate strongly for resources that are in the best interest of the students to facilitate student success and matriculation. Through joint conversations, the Rowan University Libraries and similar libraries can continue to ensure that policies and procedures are developed and maintained that do not undermine specific student populations in the future, but rather factor into these populations' college success. ✄

Notes

1.   Marc Prensky, "Digital Natives, Digital Immigrants, Part 1," *On the Horizon* 9, no. 5 (2001): 1–6, https://doi.org/10.1108/10748120110424816.

2.   Maryanne Wolf and Mirit Barzillai, "The Importance of Deep Reading," *Educational Leadership* 66, no. 6 (2009): 32–37, https://www.ascd.org/el/articles/the-importance-of -deep-reading.

3.   Wolf and Barzillai, "The Importance of Deep Reading."

4.   Jeralyn Darling, "VT Digger: Vermont State University to Close Libraries, Downgrade Sports Programs," Newstex, Singer Island, February 8, 2023; David Jesse, "After Protests and a Resignation, a New University Withdraws a Plan for a Digital-First Library," *The Chronicle of Higher Education*, April 25, 2023.

5.   John W. Creswell and Vicki L. Plano Clark, *Designing and Conducting Mixed Methods Research, 3rd ed.* (Thousand Oaks, CA: Sage, 2018); Robert E. Stake, *The Art of Case Study Research* (Thousand Oaks, CA: Sage, 1995).

6.   Diane Mizrachi, *Academic Reading Questionnaire* (Oakland, CA: The Regents of the University of California, 2015).

7.   Izek Ajzen, *Attitudes, Personality, and Behavior* (Chicago: Dorsey, 1988); Martin Fishbein, *Readings in Attitude Theory and Measurement* (New York: Wiley, 1967); Rensis Likert, "The Method of Constructing an Attitude Scale," in Martin Fishbein, *Readings in Attitude Theory and Measurement* (New York: Wiley, 1967), 90–95.

8.   Stake, *Art of Case Study Research.*