

Analyzing E-book Collections in the Digital Age

Information professionals work in an age of customized information consumption. The digital age opened the door to a virtual reality where knowledge is disseminated instantaneously around the globe and opportunities for collaboration and innovation are endless. In this era, individuals select from a wide variety of formats suited to unique learning styles and specific tasks. Convenience is the name of the game, and rapid technological advances in the consumer market shape expectations regarding how electronic content can be discovered, accessed, and used. Librarians play an important role in this landscape, particularly in regard to teaching, learning, and research environments; the ability to identify and acquire authoritative information links user communities to reliable resources that fulfill information needs. Over the past decade, a growing interest in electronic content has resulted in a greater emphasis on e-book collection development, which has required evaluations of new business models, license agreements, and collection assessment methods. The e-book market has yet to reach maturity and requires librarians to navigate a dynamic landscape that is often described as “the new wild west.”

Despite the exponential growth of available information sources, collection budgets often remain fixed and, in some cases, are reduced due to factors like the economy, demands on general institutional resources, or assumptions that digital information is free. In this environment, information needs surpass available resources, and librarians are required to justify purchases or requests for budget increases with quantitative evidence. Now more than ever, it is essential for librarians to demonstrate data-based collection development decisions or evaluate current holdings to

identify areas where resources can be shifted to support the teaching, learning, and research needs of a user community.

Collection development activities that involve electronic content require knowledge of subject areas and local needs, as well as skill sets related to quantitative research and analysis. The ability to calculate cost per use, identify usage trends, document how funds are allocated to acquire materials, and provide evidence for collection development decisions is essential. However, training opportunities in this area of library work are still in development and not always widely available. At the same time, the evolving nature of electronic resources, particularly e-books, provides challenges in regard to developing standardized methods of conducting quantitative analysis. When information managers share analysis methods currently used to evaluate electronic collections, opportunities for experimentation, feedback, and standardization become available.

The Concept behind This Issue of *Library Technology Reports*

In the summer of 2016, I was presented with an opportunity to write an issue of *Library Technology Reports* that discussed quantitative methods related to the analysis and evaluation of e-book collections. The initial concept was structured as a response to the article “The Evolving DDA Project at the Orbis Cascade Alliance” by Kathleen Carlisle Fountain.¹ Although the article focused on the results of a pilot consortial DDA project, a discussion surrounding the gaps in standardized approaches to e-book collection

analysis and general training opportunities spoke to many of the challenges that I encounter on a regular basis. As Fountain said:

I can only speak for myself, but I don't think that my experience is uncommon: I was not trained to purchase books after examining various sets of metrics. I bought books in anticipation of local needs that were based on plans, institutional research focus, the curriculum, and faculty requests. Those are two completely different skill sets, and I have learned on the job how to run analyses and use their results to make data-informed decisions. We as librarians need to continue to develop these skills that allow us to independently assess our success and adjust accordingly.²

Further in the article, she mentions that needs of librarians would be served by workable models that demonstrate how to analyze data, what it means, and how to act on it.³ This idea stayed with me and gradually evolved into the central thesis of this report.

For the past four years, I have worked in the Collection Development (CD) department at Columbia University Libraries (CUL) and regularly conduct analysis projects that assist with the overall management of the materials budget. Although CD oversees initiatives across a library system composed of twenty individual branches, the department is staffed by two professionals and one student worker. I work independently and rely exclusively on Microsoft Excel to complete most of my projects, including data collection and analysis. I mention this because I believe that many librarians who read this report may find themselves in similar situations. The term *quantitative analysis* can seem daunting, particularly when completing tasks alone or in small teams. I hope this report demonstrates that it is possible to develop quantitative skill sets and build evaluation frameworks for e-book collections based around readily available quantitative data sources, regardless of the size of an individual library or equipment budget.

Introduction to the E-book Program Development Study

Between the years 2013 and 2015, I conducted the E-book Program Development Study at CUL, a two-year assessment project aimed at gathering essential data to drive best practices related to e-book collection development strategies.⁴ The primary objective was to document the e-book landscape at Columbia University and understand how local challenges fit into the larger context of collection development and management within the academic community. A second objective was to create standardized methodologies that enabled librarians within the system to collect data and evaluate e-book holdings. The quantitative

data collected over the course of the study serves as a benchmark for the future evaluation of e-book holdings at CUL.

One of the successes of the study was the development of a cost-benefit methodology that has since been implemented at CUL. It is primarily used to evaluate the value of e-book subscriptions and packages. More recently, it has been applied to an evaluation of a big deal e-journal package. The work has involved documenting fund allocations across subject areas, calculating cost per use, examining title overlap, and identifying usage trends. This method has provided actionable results that were used by librarians at CUL to negotiate reductions in subscription fees and determine how to allocate funds to build collections. Because the study was based on local and external data that is readily available to the professional community, I believe that the methods described in the following chapters can be adopted and adapted by other libraries, regardless of size or budget.

Report Structure

As mentioned earlier, assessing the value of e-book collections begins with a foundational knowledge of patron information needs and publishing trends. Chapter 2 contains a brief overview of current trends in both areas followed by a discussion of local information needs documented through the E-book Program Development Study.

Chapter 3 introduces quantitative data and metrics; I discuss key characteristics and various types of research questions they can answer. Next, I list performance measures and indicators that can be used in information management environments to support conclusions and provide evidence for e-book collection development decisions. Finally, I provide a research framework that I rely on to plan and define my e-book analysis projects.

Chapter 4 provides three examples taken directly from my work at CUL. Each demonstrates how I have developed and applied a quantitative method to answer questions related to fund allocations, return on investment, usage trends, collection impact, and content distribution across subject headings. While my work was designed for the analysis of e-book collections, the same method has also proven successful in the evaluation of e-journal packages. This adaptation is described in the third example of this chapter.

Chapter 5 discusses how the results of quantitative research can translate into collection development policies and best practices. Evidence regarding budget allocations, usage trends, and return on investment can feed into established criteria for acquiring e-book materials and developing an ongoing strategy for collection development activities.

As the e-book landscape continues to evolve, I believe that opportunities to share analysis methods and techniques within the professional community will encourage ongoing experimentation and collaboration. The methods discussed in this report are not meant to be an end point but rather a springboard for future assessment projects and the development of standardized practices across the information profession.

Notes

1. Kathleen C. Fountain, "The Evolving DDA Project at the Orbis Cascade Alliance," *Against the Grain* 27, no. 5 (November 2015): 10–12.
2. Ibid., 12.
3. Ibid.
4. Melissa J. Goertzen, "E-book Program Development Study: Results and Recommendations," Columbia University Academic Commons, 2016, <https://doi.org/10.7916/D81Z44C3>.